Phospho-Tau (Thr231) Monoclonal Antibody (AT180)  
Product data sheet  

**Details**  

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>100 µg</td>
</tr>
<tr>
<td>Host/Isotope</td>
<td>Mouse / IgG1, kappa</td>
</tr>
<tr>
<td>Class</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Type</td>
<td>Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>AT180</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Partially purified human PHF-Tau</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.2 mg/mL</td>
</tr>
<tr>
<td>Purification</td>
<td>purified</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>PBS</td>
</tr>
<tr>
<td>Contains</td>
<td>no preservative</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>-20°C, Avoid Freeze/Thaw Cycles</td>
</tr>
</tbody>
</table>

**Species Reactivity**  

- **Species reactivity:** Human, Rat  
- **Published species:** Rat, Yeast, Non-human primate, Hamster, Cat, Mouse, Human, Chicken, Not Applicable, Horse, Dog, Rabbit, C. elegans, Fruit fly

**Tested Applications**  

- **ELISA (ELISA):** 2-10 µg/mL  
- **Immunohistochemistry (Paraffin) (IHC (P)):** 1-5 µg/mL  
- **Western Blot (WB):** 1-5 µg/mL

**Published Applications**  

- **Western Blot (WB):** See 125 publications below  
- **Immunohistochemistry (IHC):** See 115 publications below  
- **Immunocytochemistry (ICC/IF):** See 13 publications below  
- **Immunohistochemistry (Frozen) (IHC (F)):** See 12 publications below  
- **Flow Cytometry (Flow):** See 1 publications below  
- **Dot blot (DB):** See 10 publications below  
- **Miscellaneous PubMed (Misc):** See 4 publications below  
- **ELISA (ELISA):** See 1 publications below

**Suggested working dilutions are given as a guide only.** It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

**Product specific information**  

MN1040 recognizes PHF-Tau and tangles. Cross-reacts weakly with normal Tau. Does not cross react with recombinant unphosphorylated human Tau. The epitope of this antibody is the phosphorylated Thr231 residue (numbering according to human Tau40). MN1040 detects PHF-tau (Thr231) which has a predicted molecular weight of approximately 79 kDa. Purity is >95% as determined by SDS-PAGE.

**Background/Target Information**  

Tau is a neuronal microtubule-associated protein found predominantly on axons. The function of Tau is to promote tubulin polymerization and stabilize microtubules. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by Tau/MAPT localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton while the longer isoforms may preferentially play a role in its stabilization. In its hyper-phosphorylated form, Tau is the major component of paired helical filaments (PHF), the building block of neurofibrillary lesions in Alzheimer's diseases (AD) brain. Hyper-phosphorylation impairs the microtubule binding function of Tau, resulting in the destabilization of microtubules in AD brains, ultimately leading...
to the degeneration of the affected neurons. Numerous serine/threonine kinases phosphorylate Tau, including GSK-3beta, protein kinase A (PKA), cyclin-dependent kinase 5 (cdkS) and casein kinase II. Hyper-phosphorylated Tau is found in neurofibrillary lesions in a range and other central nervous system disorders such as Pick’s disease, frontotemporal dementia, cortico-basal degeneration and progressive supranuclear palsy.

Phospho-Tau (Thr231) Antibody (MN1040) in WB

Western blot analysis of protein extracts from untransfected (-) embryonic neuronal rat cells (eNRC) and HEK293 cells, and eNRC and HEK293 cells expressing (+) human-Tau 4R/2N. eNRC cells were transiently transfected with a lentiviral vector containing the coding region of human-Tau 4R/2N, whereas HEK293 cells stably express human-Tau 4R/2N. Equal amounts of untransfected and transfected eNRC lysates (10 µg each) and HEK293 cell lysates (20 µg each) were loaded per lane, and blots were probed with MN1040 (1:500) to detect phospho-PHF-tau. Data courtesy of the Innovators Program.
<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit fly / 1:10,000</td>
<td>MN1040 was used in Western Blotting to determine the mechanism by which FTDP-17 mutations promote disease in vivo.</td>
</tr>
<tr>
<td>Rat / 1:500</td>
<td>MN1040 was used in western blot to investigate the effect of a p35 fragment on Cdk5-p25 activity and tau hyperphosphorylation.</td>
</tr>
<tr>
<td>Mouse / 1:1000</td>
<td>MN1040 was used in western blot to study the effect of lithium treatment on tau hyperphosphorylation and amyloid deposition in a model of Alzheimer's disease.</td>
</tr>
<tr>
<td>Mouse / 1:1000</td>
<td>MN1040 was used in Western Blotting to elucidate accumulation of cis P-tau in midbrain and corpus callosum, and establish P38 as a central mediator of diabetes mellitus-induced tau pathology.</td>
</tr>
<tr>
<td>Mouse / 1:1000</td>
<td>MN1040 was used in Western Blotting to study the lack of effect of BDNF knockdown on Abeta or tau pathology in a model of Alzheimer's disease.</td>
</tr>
<tr>
<td>Mouse / Not Cited</td>
<td>MN1040 was used in western blot to study the lack of effect of BDNF knockdown on Abeta or tau pathology in a model of Alzheimer's disease.</td>
</tr>
<tr>
<td>Not Applicable / Not Cited</td>
<td>MN1040 was used in western blot to analyze the enhanced clearance of phosphorylated tau in primary neurons by epigallocatechin-3-gallate.</td>
</tr>
<tr>
<td>Fruit fly / Not Cited</td>
<td>MN1040 was used in western blot to characterize the role of hyperphosphorylated Tau in neurodegenerative disease.</td>
</tr>
</tbody>
</table>

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Rockford, IL 61105 USA

For more information, visit thermofisher.com/contactus
MN1040 was used in western blot to study the interaction between phosphorylated Tau and c-Jun N-terminal kinase-interacting protein 1 in Alzheimer disease.

**Mouse / Not Cited**

The Journal of biological chemistry (2009; 284: 20909)

"Phosphorylated Tau interacts with c-Jun N-terminal kinase-interacting protein 1 (JIP1) in Alzheimer disease."

Author(s): Ittner LM, Ke YD, Götz J

PubMed Article URL: http://dx.doi.org/10.1074/jbc.M109.014472

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MN1040 was used in western blot to investigate the phosphorylation and aggregation of tau protein in the 3xTg-AD mice.

**Mouse / 1:1,000**

Neuroscience letters (2011; 495: 55)

"Long term changes in phospho-APP and tau aggregation in the 3xTg-AD mice following cerebral ischemia."

Author(s): Koike MA, Garcia FG, Kitazawa M, Green KN, Laferla FM

PubMed Article URL: http://dx.doi.org/10.1016/j.neulet.2011.03.034

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MN1040 was used in western blot to study the deleterious effects of sleep deprivation on memory and Tau pathology in a murine Alzheimer's disease model.

**Mouse / 1:200**

Neurobiology of aging (2014; 35: 1813)

"Sleep deprivation impairs memory, tau metabolism, and synaptic integrity of a mouse model of Alzheimer's disease with plaques and tangles."

Author(s): DI Meoco A, Joshi YB, Praticò D

PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2014.02.011

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MN1040 was used in western blot to study the accentuated memory deficits and elevated accumulation of beta-amyloid and phosphorylated tau following chronic mild sleep deprivation in a murine Alzheimer's disease model.

**Mouse / 1:1000**

Brain research (2013; 1529: 200)

"Chronic mild sleep restriction accentuates contextual memory impairments, and accumulations of cortical A and pTau in a mouse model of Alzheimer’s disease."

Author(s): Frankola KA, Mughal MR, Matson MP

PubMed Article URL: http://dx.doi.org/10.1111/j.1742-7330.2013.01431.x

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MN1040 was used in Western Blot to indicate that PKR, independent of other kinases and upon acute brain inflammation, is capable of triggering pathological modulation of tau, which, in turn, might form the initial pathologic seed in several tauopathies such as Alzheimer's disease and Chronic traumatic encephalopathy where inflammation is severe.

**Mouse / Not Cited**

Brain pathology (Zurich, Switzerland) (2021; 31: 103)

"PKR kinase directly regulates tau expression and Alzheimer’s disease-related tau phosphorylation."


PubMed Article URL: http://dx.doi.org/10.1111/bpa.12883

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MN1040 was used in western blot to investigate the role of p35 and p39 in the regulation of cyclin-dependent kinase 5 activity during neurodevelopment.

**Mouse / 1:1000**


"p35 and p39 are essential for cyclin-dependent kinase 5 function during neurodevelopment."

Author(s): Ko J, Humbert S, Bronson RT, Takahashi S, Kulkarni AB, Li E, Tsai LH


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MN1040 was used in immunohistochemistry - paraffin section and western blot to study tau phosphorylation and protein aggregation induced by okadaic acid.

**Not Applicable / 1:500**

Acta neuropathologica communications (2016; 4:)

"A local insult of okadaic acid in wild-type mice induces tau phosphorylation and protein aggregation in anatomically distinct brain regions."

Author(s): Baker S, Götz J

PubMed Article URL: http://dx.doi.org/10.1074/jbci.M116.642220

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MN1040 was used in Western Blotting to determine the effect of long-term treatment with the selective nAChR agonist A-582941 in aged 3xTg-AD mice with robust Alzheimer's disease-like pathology.

**Mouse / Not Cited**

The American journal of pathology (2014; 184: 520)

"7 Nicotinic receptor agonist enhances cognition in aged 3xTg-AD mice with robust plaques and tangles."

Author(s): Medeiros R, Castello NA, Cheng D, Kitazawa M, Baglietto-Vargas D, Green KN, Esbendhade TA, Bitner RS, Decker MW, LaFerla FM

PubMed Article URL: http://dx.doi.org/10.1016/j.ajpath.2013.10.010

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**Human** / 2500

MN1040 was used in Western Blot to demonstrate that microglia promote tau pathology in a cell-autonomous manner.

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**Human** / 1:2000

"Efficient manipulation of gene dosage in human iPSCs using CRISPR/Cas9 nickases."


PubMed Article URL: 10.1038/s42003-021-01722-0

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**Human** / 1:1000

"Human neural stem cells alleviate Alzheimer-like pathology in a mouse model."

Author(s): Lee IS, Jung K, Kim J, Shin K, Shin J, Park K

PubMed Article URL: 10.1186/s13024-015-0035-6

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**Mouse** / Not Cited

"Phosphorylation of tau at S422 is enhanced by Abeta in TauPS2APP triple transgenic mice."


PubMed Article URL: 10.1111/j.1471-4159.2009.09.004

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**Human** / Not Cited

"Blocking IL-1 signaling rescues cognition, attenuates tau pathology, and restores neuronal -catenin pathway function in an Alzheimer’s disease model."

Author(s): K.A, K.B, L.L, M.M, N.N, O.O

PubMed Article URL: 10.1002/jnr.20827

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**Human** / 1:100

"Rho-kinase ROCK inhibitors reduce oligomeric tau protein."

Author(s): H.H, Y.Y, N.N, S.S, T.T

BMC infectious diseases (2010; 10):
"Changes of tau profiles in brains of the hamsters infected with scrapie strains 263 K or 139 A possibly associated with the alteration of phosphate kinases."
Author(s): Wang GR, Shi S, Gao C, Zhang BY, Tian C, Dong CF, Zhou RM, Li XL, Chen C, Han J, Dong XP
PubMed Article URL: http://dx.doi.org/10.1186/1471-2334-10-86

Not Applicable / Not Cited

Vaccines (2014; 2: 601)
"Doubly Phosphorylated Peptide Vaccines to Protect Transgenic P301S Mice against Alzheimer's Disease Like Tau Aggregation."
Author(s): Richter M, Mewes A, Fritsch M, Krügel U, Hoffmann R, Singer D
PubMed Article URL: http://dx.doi.org/10.3390/vaccines2030601

Mouse / 1:1000
Free radical biology & medicine (2014; 67: 387)
"Antisense oligonucleotide against GSK-3 in brain of SAMP8 mice improves learning and memory and decreases oxidative stress: Involvement of transcription factor Nrf2 and implications for Alzheimer disease."
Author(s): Dias-Santagata D, Fulga TA, Duttaroy A, Feany MB
PubMed Article URL: http://dx.doi.org/10.1007/j.freeradbiomed.2013.11.014

Human / Not Cited

"A unique tau conformation generated by an acetylation-mimic substitution modulates P301S-dependent tau pathology and hyperphosphorylation." Author(s): Ajit D, Trzcicktakiewicz H, Tseng JH, Wander CM, Chen Y, Ajit A, King DP, Cohen TJ
PubMed Article URL: http://dx.doi.org/10.1074/jbc.RA119.009674

Mouse / 1:1000
"Fyn Kinase Controls Tau Aggregation In Vivo." Author(s): Briner A, Götz J, Polanco JC
PubMed Article URL: http://dx.doi.org/10.1101/jcerep.2020.108045

Proceedings of the National Academy of Sciences of the United States of America (2007; 104; 9511)
"Roles of heat-shock protein 90 in maintaining and facilitating the neurodegenerative phenotype in tauopathies."
PubMed Article URL: http://dx.doi.org/10.1073/pnas.0701055104

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MN1040 was used in Western Blot to conclude that any abnormalities in energy metabolism were found to significantly affect the AD disease pathology.

C. elegans / Not Cited

Experimental brain research (2018; 236: 2857)
"Dihydrolipoamide dehydrogenase suppression induces human tau phosphorylation by increasing whole body glucose levels in a C. elegans model of Alzheimer's Disease."
Author(s): Ahmad W
PubMed Article URL: http://dx.doi.org/10.1077/s00221-018-5341-0

Proceedings of the National Academy of Sciences of the United States of America (2011; 108: 5819)
"Soluble amyloid beta-protein dimers isolated from Alzheimer cortex directly induce Tau hyperphosphorylation and neuritic degeneration."
Author(s): Jin M, Shepardson N, Yang T, Chen G, Walsh D, Selkoe DJ
PubMed Article URL: http://dx.doi.org/10.1073/pnas.1017033108

Human / 1:1000

"Phosphorylation of soluble tau differs in Pick's disease and Alzheimer's disease brains."
Author(s): van Eersel J, Bi M, Ke YD, Hodges JR, Xuereb JH, Gregory GC, Halliday GM, Gótz J, Kril JJ, Ittner LM
PubMed Article URL: http://dx.doi.org/10.1118/s13041-015-0174-2

Molecular brain (2015; 8: )
"The participation of insulin-like growth factor-binding protein 3 released by astrocytes in the pathology of Alzheimer's disease."
Author(s): Watanabe K, Uemura K, Asada M, Maesako M, Akiyama H, Shimohama S, Takahashi R, Kinoshita A
PubMed Article URL: http://dx.doi.org/10.1186/s13041-015-0293-y

The Journal of biological chemistry (2004; 279: 15938)
"Casein kinase 1 delta phosphorylates tau and disrupts its binding to microtubules."
Author(s): Li G, Yin H, Kuret J
PubMed Article URL: http://dx.doi.org/10.1016/j.jbc.2005.05.013

Experimental neurology (2006; 200: 460)
"High cholesterol content in neurons increases BACE, beta-amyloid, and phosphorylated tau levels in hippocampus."
Author(s): Ghribi O, Larsen B, Schrag M, Herman MM
PubMed Article URL: http://dx.doi.org/10.1016/j.expneurol.2006.03.019

Human / Not Cited

The Journal of biological chemistry (2004; 279: 15938)
"Casein kinase 1 delta phosphorylates tau and disrupts its binding to microtubules."
Author(s): Li G, Yin H, Kuret J
PubMed Article URL: http://dx.doi.org/10.1074/jbc.M31416200

"Selenoprotein S Reduces Endoplasmic Reticulum Stress-Induced Phosphorylation of Tau: Potential Role in Selenate Mitigation of Tau Pathology."
PubMed Article URL: http://dx.doi.org/10.3233/JAD-151208
Scientific reports (2013; 2) "Hypothemia-induced hyperphosphorylation: a new model to study tau kinase inhibitors."

Author(s): Bretteville A, Marcouiller F, Julien C, El Khoury NB, Petry FR, Poitras I, Mougnot D, Lévesque G, Hébert SS, Planet E

PubMed Article URL: http://dx.doi.org/10.1038/srep00480

Mouse / 1:100

MN1040 was used in Western Blotting to indicate that VAMP8 could be used to increase tau and -synuclein clearance to prevent their intracellular accumulation.

The Journal of biological chemistry (2020; 295: 17827) "Clearance of intracellular tau protein from neuronal cells via VAMP8-induced secretion."

Author(s): Pilliod J, Desjardins A, Perrègue C, Jamann H, Larochelle C, Fon EA, Leclerc N

PubMed Article URL: http://dx.doi.org/10.1074/jbc.RA120.013553

Mouse / 1:1000

MN1040 was used in Western Blot to study the ability of DMSO to directly and indirectly induce hyperphosphorylation of tau.

PloS one (2012; 7) "Dimethyl sulfoxide induces both direct and indirect tau hyperphosphorylation."

Author(s): Julien C, Marcouiller F, Bretteville A, El Khoury NB, Baillargeon J, Hébert SS, Planet E

PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0040020

Mouse / 1:1000

MN1040 was used in Western Blot to study the ability of DMSO to directly and indirectly induce hyperphosphorylation of tau.


Author(s): Abbondante S, Baglietto-Vargas D, Rodriguez-Ortiz CJ, Estrada-Hernandez T, Medeiros R, LaFerla FM

PubMed Article URL: http://dx.doi.org/10.1016/j.ajpath.2013.11.021

Mouse / 1:1000

MN1040 was used in Western Blot to study the cognitive defects observed in type 1 diabetes and the role of tau in mediating these effects.


PubMed Article URL: http://dx.doi.org/10.1093/brain/awv355

Human / Not Cited

Neurobiology of disease (2014; 64: 107) "Synergistic effects of amyloid-beta and wild-type human tau on dendritic spine loss in a f lexed double transgenic model of Alzheimer's disease."

Author(s): Chabrier MA, Cheng D, Castello NA, Green KN, LaFerla FM

PubMed Article URL: http://dx.doi.org/10.1016/j.nbd.2014.01.007

Mouse / 1:500

MN1040 was used in Western Blot to test if hypothermia could be used to assess tau kinase inhibitors efficacy.


Author(s): Wilcock DM, Gharkholonaree N, Van Nostrand WE, Davis J, Vitek MP, Colton CA

PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.1339-09.2009

PNAS 2013 Published: 25 November 2013

**Human / Not Cited**


Author(s): Wilcock DM, Gharkholonaree N, Van Nostrand WE, Davis J, Vitek MP, Colton CA

PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.1339-09.2009
MN1040 was used in western blot to assess the effect of aging on brain lipoxin A4 levels using non-transgenic and 3xTg-AD mice.

Human / Not Cited
"Restoration of lipoxin A4 signaling reduces Alzheimer's disease-like pathology in the 3xTg-AD mouse model."
Author(s): Dunn HC, Ager RR, Baglietto-Vargas D, Cheng D, Kitazawa M, Cribbs DH, Medeiros R
PubMed Article URL: http://dx.doi.org/10.3233/JAD-141335

MN1040 was used in western blot to develop a cell line stably expressing mutant tau441 for screening Alzheimer's disease drug candidates

Human / Not Cited
"Stable mutated tau441 transfected SH-SY5Y cells as screening tool for Alzheimer's disease drug candidates."
Author(s): Löfler T, Flunkert S, Taub N, Schofield EL, Ward MA, Windisch M, Hutter-Paier B
PubMed Article URL: http://dx.doi.org/10.1007/s12031-012-9716-6

MN1040 was used in western blot to study the effect of docosahexaenoic acid and docosapentenoic acid on amyloid beta and tau pathology

Human / 1:1,000
"Dietary docosahexaenoic acid and docosapentenoic acid ameliorate amyloid-beta and tau pathology via a mechanism involving presenilin 1 levels."
Author(s): Green KN, Martinez-Coria H, Khashwji H, Hall EB, Yurko-Mauro KA, Ellis L, LaFerra FM
PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0055-07.2007

MN1040 was used in western blot to investigate the effect of trehalose on tau accumulation in AD patients

Rat / Not Cited
Neurobiolgy of aging (2012; 33: 2291)
"Autophagic degradation of tau in primary neurons and its enhancement by trehalose."
Author(s): Krüger U, Wang Y, Kumar M, Mandelkow EM
PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2011.11.009

MN1040 was used in Western Blotting to investigate the role of IL-1 in Alzheimer's disease pathogenesis.

Mouse / 1:1,000
"Sustained interleukin-1 overexpression exacerbates tau pathology despite reduced amyloid burden in an Alzheimer's mouse model."
Author(s): Ghosh S, Wu MD, Shaftel SS, Kyrkanides S, LaFerra FM, Olschowka JA, O'Banion MK
PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.4361-12.2013

MN1040 was used in Western Blotting to suggest that TFP5 peptide may be a novel candidate for type 2 diabetes therapy.

Rat / 1:500
"TFP5, a peptide derived from p35, a Cdk5 neuronal activator, rescues cortical neurons from glucose toxicity."
Author(s): Binukumar BK, Zheng YL, Shukla V, Amin ND, Grant P, Pant HC
PubMed Article URL: http://dx.doi.org/10.3233/JAD-131784

MN1040 was used in Western Blotting to describe the role of miR-132 in amyloid and TAU pathology associated with Alzheimer's disease

Mouse / 1:500
EMBO molecular medicine (2016; 8: 1005)
"miR-132 loss de-represses ITPKB and aggravates amyloid and TAU pathology in Alzheimer's brain."
Author(s): Salta E, Sierksma A, Vanden Eynden E, De Strooper B
PubMed Article URL: http://dx.doi.org/10.1523/EMMM.2016.06520

MN1040 was used in Western Blotting to investigate the role of IL-1 in Alzheimer's disease pathogenesis.

Human / Not Cited
The Journal of biological chemistry (2020; 295: 13812)
"Truncation of Tau selectively facilitates its pathological activities."
PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0055-12.2013

MN1040 was used in western blot to determine how Alzheimer disease phenotypes are exacerbated and neurodegeneration occurs by DNA polymerase beta deficiency

Not Applicable / Not Cited
Nucleic acids research (2015; 43: 943)
"DNA polymerase deficiency leads to neurodegeneration and exacerbates Alzheimer disease phenotypes."
PubMed Article URL: http://dx.doi.org/10.1093/nar/gku1356

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<thead>
<tr>
<th>Page Dimensions: 612.0x792.0</th>
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</tr>
<tr>
<td><em>not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.</em></td>
</tr>
</tbody>
</table>

### Mouse / 1:500

*PloS one* (2014; 8):

**"Modeling Alzheimer's disease in mouse without mutant protein overexpression: cooperative and independent effects of A and tau."**

**Author(s):** Guo Q, Li H, Cole AL, Hur J Y, Li Y, Zheng H

**PubMed Article URL:** [http://dx.doi.org/10.1371/journal.pone.0080706](http://dx.doi.org/10.1371/journal.pone.0080706)

### Mouse / 1:1000

*Frontiers in molecular neuroscience* (2020; 11):

**"Acute Down-regulation of BDNF Signaling Does Not Replicate Exacerbated Amyloid- Levels and Cognitive Impairment Induced by Cholinergic Basal Forebrain Lesion."**

**Author(s):** Turnbull MT, Boskovic Z, Coulson EJ

**PubMed Article URL:** [http://dx.doi.org/10.3389/fnmol.2018.00051](http://dx.doi.org/10.3389/fnmol.2018.00051)

### C. elegans / Not Cited

*Acta neuropathologica communications* (2019; 7):

**"Resistance and resilience to Alzheimer’s disease pathology are associated with reduced cortical pTau and absence of limbic-predominant age-related TDP-43 encephalopathy in a community-based cohort."**

**Author(s):** Latimer CS, Burke BT, Liachko NF, Currey HN, Kippens MD, Gibbons LE, Henriksen J, Darvas M, Domoto-Reilly K, Jayadev S, Grabowski TJ, Crane PK, Larson EB, Kraemer BC, Bird TD, Keene CD

**PubMed Article URL:** [http://dx.doi.org/10.1186/s40478-019-0743-1](http://dx.doi.org/10.1186/s40478-019-0743-1)

### Mouse / 1:1000

*Biological psychiatry* (2013; 74: 357):

**"Mifepristone alters amyloid precursor protein processing to preclude amyloid beta and also reduces tau pathology."**

**Author(s):** Baglietto-Vargas D, Medeiros R, Martinez-Coria H, LaFerla FM, Green KN


### Human / 1:1000


**"Reductions in amyloid-beta-derived neuroinflammation, with miconycine, restore cognition but do not significantly affect tau hyperphosphorylation."**

**Author(s):** Parachikova A, Vasilevko V, Cribbs DH, LaFerla FM, Green KN

**PubMed Article URL:** [http://dx.doi.org/10.1038/jad.2010-100204](http://dx.doi.org/10.1038/jad.2010-100204)

### Mouse / 1:5,000

*NPJ vaccines* (2021; 4):

**"Qß Virus-like particle-based vaccine induces robust immunity and protects against tauopathy."**


**PubMed Article URL:** [http://dx.doi.org/10.1038/s41541-019-0118-4](http://dx.doi.org/10.1038/s41541-019-0118-4)

### Mouse / 1:1000


**"Activated CX3CL1/Smad2 Signals Prevent Neuronal Loss and Alzheimer’s Tau Pathology-Mediated Cognitive Dysfunction."**

**Author(s):** Fan Q, He W, Gayen M, Benoit MR, Luo X, Hu X, Yan R


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Mouse / 1:200

"12/15-Lipoxygenase Inhibition Reverses Cognitive Impairment, Brain Amyloidosis, and Tau Pathology by Stimulating Autophagy in Aged Triple Transgenic Mice."

Author(s): Di Meco A, Li JG, Blass BE, Abou-Gharbia M, Lauretti E, Praticò D

PubMed Article URL: http://dx.doi.org/10.1016/j.biopsych.2016.05.023

Human / Not Cited

Journal of neuroinflammation (2010; 7; )

"Therapeutic versus neuroinflammatory effects of passive immunization is dependent on A/amyloid burden in a transgenic mouse model of Alzheimer’s disease."

Author(s): Minami SS, Sidahmed E, Aid S, Shimoji M, Niikura T, Mochett I, Rebeck GW, Prendergast JS, Dealwis C, Wetzel R, Bogetti F, Matsuoka Y, Hoe HS, Turner RS

PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-7-57

Mouse / Not Cited

"TREM2 modifies microglial phenotype and provides neuroprotection in P301S tau transgenic mice via TREM2"

Authors: Minami SS, Sidahmed E, Aid S, Shimoji M, Niikura T, Mochett I, Rebeck GW, Prendergast JS, Dealwis C, Wetzel R, Bogetti F, Matsuoka Y, Hoe HS, Turner RS

PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-7-57

Not Applicable / 1:1000

Neuropsychopharmacology (2016; 105: 196)

"TREM2 is a microglial receptor that regulates microglial function and provides neuroprotection in P301S Tau transgenic mice."

Author(s): Minami SS, Sidahmed E, Aid S, Shimoji M, Niikura T, Mochett I, Rebeck GW, Prendergast JS, Dealwis C, Wetzel R, Bogetti F, Matsuoka Y, Hoe HS, Turner RS

PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-7-57

Mouse / Not Cited

"TREM2 modifies microglial phenotype and provides neuroprotection in P301S tau transgenic mice via TREM2"

Author(s): Minami SS, Sidahmed E, Aid S, Shimoji M, Niikura T, Mochett I, Rebeck GW, Prendergast JS, Dealwis C, Wetzel R, Bogetti F, Matsuoka Y, Hoe HS, Turner RS

PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-7-57

Human / Not Cited

International Journal of Moleculer Sciences (2021; 22)

"Clioquinol Decreases Levels of Phosphorylated, Truncated, and Oligomerized Tau Protein."


PubMed Article URL: http://dx.doi.org/10.3390/ijms222112063


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MN1040 was used in Western Blot to develop an electronic model to predict Alzheimer's immunity genes.

Human / Not Cited

Communications biology (2022; 5):
"Machine learning prediction and tau-based screening identifies potential Alzheimer's disease genes relevant to immunity."
PubMed Article URL: http://dx.doi.org/10.1038/s42003-022-03068-7

Not Applicable / 1:200

MN1040 was used in Western Blotting to provide a link between the calcium dysregulation and metabolic dysfunction hypotheses of Alzheimer's disease (AD) and suggest mGα2+ exchange as potential therapeutic target in AD.

Human / 1:500

Nature communications (2019; 10):
"Impaired mitochondrial calcium efflux contributes to disease progression in models of Alzheimer's disease."
PubMed Article URL: http://dx.doi.org/10.1038/s41467-019-11813-6

Mouse / Not Cited

MN1040 was used in Western Blotting to propose that dysregulation of neural gene networks may set in motion the pathologic cascade that leads to AD.

Human / Not Cited

Cell reports (2019; 26: 1112):
"REST and Neural Gene Network Dysregulation in iPSC Models of Alzheimer's Disease."
Author(s): Meyer K, Feldman HM, Lu T, Drake D, Lim ET, Ling KH, Bishop NA, Pan Y, Seo J, Lin YT, Su SC, Church GM, Tsai LH, Yankner BA
PubMed Article URL: http://dx.doi.org/10.1016/j.celrep.2019.01.023

Human / 1:500

International journal of molecular sciences (2020; 21:):
"Serum Tau Proteins as Potential Biomarkers for the Assessment of Alzheimer's Disease Progression."
Author(s): Nam E, Lee YB, Moon C, Chang KA
PubMed Article URL: http://dx.doi.org/10.3390/ijms21145007

Mouse / Not Cited

Neurobiology of aging (2013; 34: 1540):
"Fractalkine overexpression suppresses tau pathology in a mouse model of tauopathy."
PubMed Article URL: http://dx.doi.org/10.1002/cm.20157

Human / Not Cited

MN1040 was used in Western Blotting to suggest that tau protein, especially NEX tau protein, are useful biomarkers for monitoring AD progression.

Human / Not Cited

International journal of molecular sciences (2020; 21:):
"Serum Tau Proteins as Potential Biomarkers for the Assessment of Alzheimer's Disease Progression."
Author(s): Nam E, Lee YB, Moon C, Chang KA
PubMed Article URL: http://dx.doi.org/10.3390/ijms21145007

Mouse / 1:1000

The Journal of biological chemistry (2021; 297:):
"Spreading of Alzheimer tau seeds is enhanced by aging and template matching with limited impact of amyloid-.
Author(s): Nies SH, Takahashi H, Herber CS, Huttner A, Chase A, Strittmatter SM
PubMed Article URL: http://dx.doi.org/10.1016/j.jbc.2021.101159

Human / Not Cited

MN1040 was used in Western Blotting to propose that dysregulation of neural gene networks may set in motion the pathologic cascade that leads to AD.

Mouse / Not Cited

"Insulin dysfunction induces in vivo tau hyperphosphorylation through distinct mechanisms."
PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.3949-07.2007


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MN1040 was used in western blot to investigate the role of lysosomal dysfunction in tau cleavage and neurotoxicity in vivo.

PLoS genetics (2010; 6:
"Lysosomal dysfunction promotes cleavage and neurotoxicity of tau in vivo."
Author(s): Khurana V, Elson-Schwab I, Fulga TA, Sharp KA, Loewen CA, Mulkearns E, Tyynelä J, Scherzer CR, Feany MB
PubMed Article URL: http://dx.doi.org/10.1371/journal.pgen.1001026

Not Applicable / 1:1000

MN1040 was used in western blot to study the amyloid beta and tau pathology in APOE knockout mice, carrying human APOEpsilon3 or epsilon4 transgenes, after diet-induced insulin resistance with and without pioglitazone treatment.

PLoS one (2011; 6:
"The 3 and 4 alleles of human APOE differentially affect tau phosphorylation in hyperinsulinemic and pioglitazone treated mice."
Author(s): To AW, Ribe EM, Chuang TT, Schroeder JE, Lovestone S
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0016991

MN1040 was used in western blot to use a mouse thiamine deficiency model to assess the contribution of PKR in neuronal death.

Cell death & disease (2015; 6:
"PKR downregulation prevents neurodegeneration and -amyloid production in a thiamine-deficient model."
PubMed Article URL: http://dx.doi.org/10.1038/cddis.2014.552

Mouse / Not Cited

Human / 1:1000

MN1040 was used in western blot to study the ability of the rapamycin analog temsirolimus to promote autophagic clearance of hyperphosphorylated tau and improve memory deficits in animal models.

Neuropharmacology (2014; 85: 121)
"Temsirolimus attenuates tauopathy in vitro and in vivo by targeting tau hyperphosphorylation and autophagic clearance."
PubMed Article URL: http://dx.doi.org/10.1016/j.neuropharm.2014.05.032

MN1040 was used in western blot to study the ability of a novel GSK3 inhibitor to restore synaptic plasticity in rat brain and inhibit PBMC GSK3 in a phase 1 clinical trial.

Journal of neurochemistry (2013; 125: 446)
"AZD1080, a novel GSK3 inhibitor, rescues synaptic plasticity deficits in rodent brain and exhibits peripheral target engagement in humans."
PubMed Article URL: http://dx.doi.org/10.1111/jnc.12203

MN1040 was used in western blot to use rTg4510 mice to elucidate pathogenesis of tau-induced disease.

The Journal of clinical investigation (2008; 118: 1877)
"Pin1 has opposite effects on wild-type and P301L tau stability and tauopathy."
Author(s): Lim J, Balastik M, Lee TH, Nakamura K, Liou YC, Sun A, Finn G, Pastorino L, Lee VM, Lu KP
PubMed Article URL: http://dx.doi.org/10.1172/JCI34308

Rat / Not Cited

Human / Not Cited

MN1040 was used in western blot to study the effects of p73 haploinsufficiency on tau phosphorylation status and the activity of GSK3-beta, c-Abl and Cdk5 in murine models of aging and Alzheimer’s disease.

PLoS genetics (2010; 6:
"Analysis of tau post-translational modifications in rTg4510 mice, a model of tau pathology."
PubMed Article URL: http://dx.doi.org/10.1186/s13024-015-0011-1

Mouse / 1:500

"p73 haploinsufficiency causes tau hyperphosphorylation and tau kinase dysregulation in mouse models of aging and Alzheimer’s disease."
Author(s): Cancino GI, Miller FD, Kaplan DR
PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2012.04.010

MN1040 was used in Western Blotting to characterise the neuroinflammation and cellular changes induced by systemic inflammation, and their responses to anti-inflammatory treatment.

**Mouse / 1:1,000**

*Journal of neuroinflammation (2018; 15:)*

"Evidence of the impact of systemic inflammation on neuroinflammation from a non-bacterial endotoxin animal model."

Author(s): Huang C, Irwin MG, Wong GTC, Chang RCC

PubMed Article URL: http://dx.doi.org/10.1186/s12974-018-1163-z

MN1040 was used in Western Blotting to suggest that MECP2 is a potential novel regulator of tauopathy relevant to AD and tauopathies.

**Mouse / Not Cited**

*Frontiers in molecular neuroscience (2020; 10:)*

"Whole Genome Expression Analysis in a Mouse Model of Tauopathy Identifies MECP2 as a Possible Regulator of Tau Pathology."

Author(s): Maphis NM, Jiang S, Binder J, Wright C, Gopalan B, Lamb BT, Bhaskar K

PubMed Article URL: http://dx.doi.org/10.3389/fnmol.2017.00069

MN1040 was used in Western Blotting to identify proteins in human brain extract that bind to oligomeric A1-42 (oA1-42) and/or monomeric A1-42 (mA1-42) baits.

**Human / Not Cited**

*eLife (2017; 6:)*

"Somatostatin binds to the human amyloid peptide and favors the formation of distinct oligomers."


PubMed Article URL: http://dx.doi.org/10.7554/eLife.28401

MN1040 was used in Western Blotting to examine the role of pazopanib in mouse models that express either human mutant P301L tau or triple mutant amyloid precursor protein.

**Mouse / 1:2,000**

*Journal of Alzheimer's disease : JAD (2018; 60: 461)*

"Pazopanib Reduces Phosphorylated Tau Levels and Alters Astrocytes in a Mouse Model of Tauopathy."

Author(s): Javidnia M, Hebron ML, Xin Y, Kinney NG, Moussa CE

PubMed Article URL: http://dx.doi.org/10.3233/JAD-170429

**Human / 1:1000**

*Neurobiology of disease (2014; 62: 407)*

"Endogenous murine tau promotes neurofibrillary tangles in 3xTg-AD mice without affecting cognition."


PubMed Article URL: http://dx.doi.org/10.1016/j.nbd.2013.10.019

MN1040 was used in Western Blot to test the efficacy of the selective CSF1R inhibitor JNJ-40346527 in the P301S mouse tauopathy model.

**Mouse / Not Cited**

*Brain : a journal of neurology (2019; 142: 3243)*

"CSF1R inhibitor JNJ-40346527 attenuates microglial proliferation and neurodegeneration in P301S mice."


PubMed Article URL: http://dx.doi.org/10.1093/brain/awz241

MN1040 was used in Western Blotting to study the effect of endogenous murine tau on cognition and neurofibrillar tangles in a murine Alzheimer’s disease model transgenically expressing human tau.

**Mouse / Not Cited**


"Chronic Sleep Disruption Advances the Temporal Progression of Tauopathy in P301S Mutant Mice."


PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0275-18.2018

**Human / Not Cited**

*Frontiers in molecular neuroscience (2020; 10:)*

"Whole Genome Expression Analysis in a Mouse Model of Tauopathy Identifies MECP2 as a Possible Regulator of Tau Pathology."

Author(s): Maphis NM, Jiang S, Binder J, Wright C, Gopalan B, Lamb BT, Bhaskar K

PubMed Article URL: http://dx.doi.org/10.3389/fnmol.2017.00069

MN1040 was used in Western Blotting to suggest that MECP2 is a potential novel regulator of tauopathy relevant to AD and tauopathies.

**Mouse / Not Cited**

*Journal of Alzheimer's disease : JAD (2018; 60: 461)*

"Pazopanib Reduces Phosphorylated Tau Levels and Alters Astrocytes in a Mouse Model of Tauopathy."

Author(s): Javidnia M, Hebron ML, Xin Y, Kinney NG, Moussa CE

PubMed Article URL: http://dx.doi.org/10.3233/JAD-170429

**Mouse / Not Cited**

*Brain : a journal of neurology (2019; 142: 3243)*

"CSF1R inhibitor JNJ-40346527 attenuates microglial proliferation and neurodegeneration in P301S mice."


PubMed Article URL: http://dx.doi.org/10.1093/brain/awz241

MN1040 was used in Western Blot to test the efficacy of the selective CSF1R inhibitor JNJ-40346527 in the P301S mouse tauopathy model.

**Mouse / Not Cited**


"Chronic Sleep Disruption Advances the Temporal Progression of Tauopathy in P301S Mutant Mice."


PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0275-18.2018

**Not Applicable / Not Cited**

*Scientific reports (2015; 5:)*

"Neuroinflammation and A accumulation linked to systemic inflammation are decreased by genetic PKR down-regulation."


PubMed Article URL: http://dx.doi.org/10.1038/srep08489

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MN1040 was used in western blot to study the effects of diet-induced obesity on tau pathology

Diabetes (2013; 62: 1681)

"Dietary effects of diet-induced obesity on pathology are independent of insulin resistance in transgenic mice."


PubMed Article URL: http://dx.doi.org/10.2337/db12-0866

Fruit fly / 1:2,000

Human molecular genetics (2009; 18: 164)

"Dissociation of tau toxicity and phosphorylation: role of GSK3-beta, MARK and Cdk5 in a Drosophila model."

Author(s): Chatterjee S, Sang TK, Lawless GM, Jackson GR

PubMed Article URL: http://dx.doi.org/10.1093/hmg/ddn326

Mouse / 1:500


"Convergence of presenilin- and tau-mediated pathways on axonal trafficking and neuronal function."

Author(s): Peethummongsin E, Yang L, Kallhoff-Muñoz V, Hu L, Takashima A, Pautler RG, Zheng H

PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.1964-10.2010

Mouse / Not Cited


"Reducing amyloid-related Alzheimer’s disease pathogenesis by a small molecule targeting filamin A."

Author(s): Wang HY, Bakshi K, Franklin M, Stucky A, Goberdhan M, Shah SM, Burns LH


Mouse / Not Cited

The American journal of pathology (2001; 158: 1481)

"Structural analysis of Pick’s disease-derived and in vitro-assembled tau filaments."

Author(s): King ME, Ghoshal N, Wall JS, Binder LJ, Ksiezek-Reding H

PubMed Article URL: http://dx.doi.org/10.1016/S0002-9440(10)64099-0

Human / Not Cited


"Sustained Arginase 1 Expression Modulates Pathological Tau Deposits in a Mouse Model of Tauopathy."


PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.3959-14.2015

Mouse / Not Cited

The American journal of pathology (2001; 158: 1481)

"Structural analysis of Pick’s disease-derived and in vitro-assembled tau filaments."

Author(s): King ME, Ghoshal N, Wall JS, Binder LJ, Ksiezek-Reding H

PubMed Article URL: http://dx.doi.org/10.1016/S0002-9440(10)64099-0

Rat / 1:1000

Neurotoxicology (2012; 33: 370)

"Over activation of hippocampal serine/threonine protein phosphatases Pp1 and Pp2A is involved in lead-induced deficits in learning and memory in young rats."

Author(s): Rahman A, Khan KM, Al-Khaledi G, Khan I, Al-Shemery T

PubMed Article URL: http://dx.doi.org/10.1016/j.neuro.2012.02.014

Mouse / 1:100

Molecular neurobiology (2023; 60: 1021)

"Direct and Indirect Effects of Filamin A on Tau Pathology in Neuronal Cells."

Author(s): Levitt S, Pilliod J, Aumont É, Armanville S, Tremblay C, Calon F, Leclerc N

PubMed Article URL: http://dx.doi.org/10.1007/s12035-022-03121-w

Mouse / 1:100

Molecular neurobiology (2023; 60: 1021)

"Direct and Indirect Effects of Filamin A on Tau Pathology in Neuronal Cells."

Author(s): Levitt S, Pilliod J, Aumont É, Armanville S, Tremblay C, Calon F, Leclerc N

PubMed Article URL: http://dx.doi.org/10.1007/s12035-022-03121-w

Mouse / 1:500-1:10,000

Biochemistry (2002; 41: 15203)

"Molecular cloning and functional characterization of chicken brain tau: isoforms with up to five tandem repeats."

Author(s): Yoshida H, Goedert M

PubMed Article URL: http://dx.doi.org/10.1021/bi026464m


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MN1040 was used in immunohistochemistry and western blot to investigate the interactions between Abeta1-42 and Abeta1-40

Molecular neurodegeneration (2014; 9: )
"Tau pathogenesis is promoted by A1-42 but not A1-40."
Author(s): Hu XL, Li X, Zhao M, Gottesdiener A, Luo W, Paul S
PubMed Article URL:http://dx.doi.org/10.1186/1750-1236-9-52

Human / 1:1000
"Memantine improves cognition and reduces Alzheimer's-like neuropathology in transgenic mice."
Author(s): Martinez-Coria H, Green KN, Billings LM, Kitazawa M, Albrecht M, Rammes G, Parsons CG, Gupta S, Banerjee P, LaFerla FM
PubMed Article URL:http://dx.doi.org/10.23933/ajpath.2010.090452

Human / 1:1000
MN1040 was used in Western Blotting to suggest that the novel heterozygous mutation of DYRK1A results in loss-of-function of the kinase activity of DYRK1A and may contribute to the developmental delay observed in the patient.

Scientific reports (2020; 10: )
"A novel de novo heterozygous DYRK1A mutation causes complete loss of DYRK1A function and developmental delay."
Author(s): Lee KS, Choi M, Kwon DW, Kim D, Choi JM, Kim AK, Ham Y, Han SB, Cho S, Cheon CK
PubMed Article URL:http://dx.doi.org/10.1038/s41598-020-66750-y

Mouse / 1:200
"Calpain-2 as a therapeutic target in repeated concussion-induced neuropathy and behavioral impairment."
Author(s): Wang Y, Liu Y, Nham A, Sherbaf A, Quach D, Yahya E, Ranburger D, Bi X, Baudry M
PubMed Article URL:http://dx.doi.org/10.1126/sciadv.aba5547

Mouse / 200
MN1040 was used in Western Blotting to investigate the contribution of calpain-1 and calpain-2 on neurodegeneration following a concussion using a mouse model of repeated concussions.

Science advances (2020; 6: )
"Obesity, diabetes, and leptin resistance promote tau pathology in a mouse model of disease."
Author(s): Platt TL, Beckett TL, Kohler K, Niedowicz DM, Murphy MP
PubMed Article URL:http://dx.doi.org/10.1016/j.neuroscience.2010.04.009

Human / 1:1000
"The pattern of human tau phosphorylation is the result of priming and feedback events in primary hippocampal neurons."
Author(s): Bertrand J, Plouffe V, Sénéchal P, Leclerc N
PubMed Article URL:http://dx.doi.org/10.1016/j.neuroscience.2015.12.011

Mouse / 1:200
"Stress hormone leads to memory deficits and altered tau phosphorylation in a model of Alzheimer's disease."
Author(s): Joshi YB, Chu J, Praticò D
PubMed Article URL:http://dx.doi.org/10.3233/JAD-2012-120328

Mouse / 1:200
MN1040 was used in western blot to study the effects of glucocorticoids on memory, tau phosphorylation and beta-amyloid levels in a murine model of Alzheimer's disease

"PHF-like tau phosphorylation in mammalian hibernation is not associated with p25-formation."
Author(s): Steiler JT, Bullmann T, Kohl F, Barnes BM, Arendt T
PubMed Article URL:http://dx.doi.org/10.1007/s00702-008-0181-x

"Memantine improves cognition and reduces Alzheimer's-like neuropathology in transgenic mice."
Author(s): Martinez-Coria H, Green KN, Billings LM, Kitazawa M, Albrecht M, Rammes G, Parsons CG, Gupta S, Banerjee P, LaFerla FM
PubMed Article URL:http://dx.doi.org/10.1038/s41598-020-66750-y

"Stress hormone leads to memory deficits and altered tau phosphorylation in a model of Alzheimer's disease."
Author(s): Joshi YB, Chu J, Praticò D
PubMed Article URL:http://dx.doi.org/10.3233/JAD-2012-120328

Molecular neurodegeneration (2014; 9: )
"Tau pathogenesis is promoted by A1-42 but not A1-40."
Author(s): Hu XL, Li X, Zhao M, Gottesdiener A, Luo W, Paul S
PubMed Article URL:http://dx.doi.org/10.1186/1750-1236-9-52


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<td>Author(s): Perez SE, Getova DP, He B, Counts SE, Geula C, Desire L, Coutadeur S, Peillon H, Ginsberg SD, Mufson EJ</td>
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<td>PubMed Article URL:<a href="http://dx.doi.org/10.1016/j.ajpath.2011.10.027">http://dx.doi.org/10.1016/j.ajpath.2011.10.027</a></td>
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MN1040 was used in immunohistochemistry to study HSP overexpression in nonhuman aged primate pallido-nigral axonal spheroids.

"Overexpression of heat shock proteins in pallido-nigral axonal spheroids of nonhuman aged primates."
PubMed Article URL: http://dx.doi.org/10.1007/s00401-005-1030-8

MN1040 was used in immunohistochemistry to study a clinical case with both Lewy body and Alzheimer diseases.

Journal of neurology, neurosurgery, and psychiatry (2003; 74: )
"Coexistent Lewy body disease in a case of "visual variant of Alzheimer's disease.""
Author(s): Tang-Wai DF, Josephs KA, Boeve BF, Petersen RC, Parisi JE, Dickson DW
PubMed Article URL: http://dx.doi.org/10.1136/jnnp.74.3.389

MN1040 was used in immunohistochemistry to investigate the neuropathologic outcome of mild cognitive impairment following progression to clinical dementia.

Archives of neurology (2006; 63: 674)
"Neuropathologic outcome of mild cognitive impairment following progression to clinical dementia."
Author(s): Jicha GA, Parisi JE, Dickson DW, Johnson K, Cha R, Ivnik RJ, Tangalos EG, Boeve BF, Knopman DS, Braak H, Petersen RC
PubMed Article URL: http://dx.doi.org/10.1001/archneur.63.5.674

MN1040 was used in immunohistochemistry to characterize the effects of a novel presenilin 1 mutation in early-onset Alzheimer disease.

Neuroscience letters (2011; 487: 287)
"Biomedical, neuropathological, and neuroimaging characteristics of early-onset Alzheimer's disease due to a novel PSEN1 mutation."
PubMed Article URL: http://dx.doi.org/10.1016/j.neulet.2010.10.039

MN1040 was used in immunohistochemistry to investigate the association of cerebral microinfarcts with severe cerebral beta-amyloid angiopathy.

Brain pathology (Zurich, Switzerland) (2010; 20: 459)
"Cerebral microinfarcts associated with severe cerebral beta-amyloid angiopathy."
Author(s): Soontornniyomkij V, Lynch MD, Merbash S, Pomakian J, Badkoobehi H, Clare R, Vinters HV
PubMed Article URL: http://dx.doi.org/10.1111/j.1750-3639.2009.00322.x

MN1040 was used in immunohistochemistry to characterize the effects of a novel presenilin 1 mutation in early-onset Alzheimer disease.

Nature (2018; 562: 578)
"Clearance of senescent glial cells prevents tau-dependent pathology and cognitive decline."
Author(s): Russian TJ, Aziz A, Meyer CF, Swenson BL, van Deursen JM, Baker DJ
PubMed Article URL: http://dx.doi.org/10.1038/s41586-018-0543-y

MN1040 was used in immunohistochemistry and western blot to study the ability of an anti-oligomeric tau monoclonal antibody to specifically reduce oligomeric tau and improve memory and locomotion in a murine Alzheimer's disease model.

"Passive immunization with Tau oligomer monoclonal antibody reverses tauopathy phenotypes without affecting hyperphosphorylated neurofilibrillary tangles."

MN1040 was used in immunohistochemistry to study the role of senescent cells in the aetiology of tau-dependent pathologies.

The international journal of neuropsychopharmacology (2007; 10: 231)
"Thalamic D2 receptors in dementia with Lewy bodies, Parkinson's disease, and Parkinson's disease dementia."
Author(s): Piggott MA, Ballard CG, Dickinson HO, McKeith IG, Perry RH, Perry EK
PubMed Article URL: http://dx.doi.org/10.1017/S146114570600647X

MN1040 was used in immunohistochemistry to investigate the changes of D2 receptors in dementia patients

Human / Not Cited


"Selective loss of dopamine D2 receptors in temporal cortex in dementia with Lewy bodies, association with cognitive decline."

Author(s): Piggott MA, Ballard CG, Rowan E, Holmes C, McKee IG, Jaros E, Perry RH, Perry EK

PubMed Article URL: http://dx.doi.org/10.1002/syn.20441

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MN1040 was used in immunohistochemistry to study the amyloid pathology of Alzheimer disease

Mouse / 1:150


"Progression of amyloid pathology to Alzheimer's disease pathology in an amyloid precursor protein transgenic mouse model by removal of nitric oxide synthase 2."

Author(s): Wilcock DM, Lewis MR, Van Nostrand WE, Davis J, Previti ML, Gharkholonarehe N, Vital MP, Colton CA

PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.5066-07.2008

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MN1040 was used in immunohistochemistry to examine effects of age and acute beta-blocker administration on LC and hippocampus pathology, neuroinflammation and learning and memory behavior in mice.

Mouse / 1:500

Neurobiology of aging (2021; 106: 241)

"Age-related neuroinflammation and pathology in the locus coeruleus and hippocampus: beta-adrenergic antagonists exacerbate impairment of learning and memory in aged mice."

Author(s): Evans AK, Park HH, Saw NL, Singhal K, Ogawa G, Leib RD, Shamloo M

PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2021.06.012

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MN1040 was used in immunohistochemistry to study the role of tau accumulation in distal dendrites in tauopathy

Human / 1:200


"Accumulation of vesicle-associated human tau in distal dendrites drives degeneration and tau secretion in an in situ cellular tauopathy model."

Author(s): Lee S, Kim W, Li Z, Hall GF

PubMed Article URL: http://dx.doi.org/10.1155/2012/172837

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MN1040 was used in immunohistochemistry to study the pathology of TDP-43 in primary progressive aphasia and frontotemporal dementia

Human / Not Cited

Acta neuropathologica (2010; 120: 43)

"TDP-43 pathology in primary progressive aphasia and frontotemporal dementia with pathologic Alzheimer disease."


PubMed Article URL: http://dx.doi.org/10.1007/s00401-010-0681-2

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MN1040 was used in immunohistochemistry to investigate the lesions of parenchyma and vasculum in ageing equine brains with histological and immunohistochemical methods

Horse / 1:50

Journal of comparative pathology (2010; 142: 61)

"Parenchymal and vascular lesions in ageing equine brains: histological and immunohistochemical studies."


PubMed Article URL: http://dx.doi.org/10.1007/10.1523/jarpa.2009.07.007

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MN1040 was used in immunohistochemistry to analyze the cholinergic pathology in a tauopathy model

Mouse / 1:1,400-1:2,400

Brain research (2010; 1347: 111)

"Analysis of the cholinergic pathology in the P301L tau transgenic pR5 model of tauopathy."

Author(s): Köhler C, Bista P, Götz J, Schröder H

PubMed Article URL: http://dx.doi.org/10.1016/j.brainres.2010.05.076

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MN1040 was used in immunohistochemistry to suggest Wnt-activation occurs prior to 3 months of age in the JNPL3 mouse model of frontotemporal dementia

Mouse / Not Applicable / Not Cited

Neurobiology of aging (2009; 30: 14)

"Wnt-pathway activation during the early stage of neurodegeneration in FTDP-17 mice."

Author(s): Wiedau-Pazos M, Wong E, Solomon E, Alarcon M, Geschwind DH

PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2007.05.015

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MN1040 was used in immunohistochemistry to study the role of BRCA1 in Alzheimer disease

Human / Not Cited


"BRCA1 may modulate neuronal cell cycle re-entry in Alzheimer disease."


PubMed Article URL: http://dx.doi.org/10.7150/ijms.4.140

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MN1040 was used in immunohistochemistry to study the immune dysfunction in early stages of Alzheimer disease

**Human / 1:500**

*Neurobiology of aging* (2007; 28: 1821)

"Inflammatory changes parallel the early stages of Alzheimer disease."

Author(s): Parakhchikova A, Agadjanyan MG, Cribbs DH, Burton-Jones M, Perreau V, Rogers J, Beach TG, Cotman CW PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2006.08.014

MN1040 was used in Immunohistochemistry-immunofluorescence to provide new insights into the potential link between the disruption of circadian rhythm and the development of AD.

**Mouse / 1:100**

*Brain pathology (Zurich, Switzerland)* (2022; 32: )

"Chronic sleep deprivation altered the expression of circadian clock genes and aggravated Alzheimer’s disease neuropathology."


**Mouse / 1:250**

*Nature medicine* (2019; 25: 152)

"Identification of evolutionarily conserved gene networks mediating neurodegenerative dementia."


MN1040 was used in Immunohistochemistry to identify small molecules that can normalize the disease-associated modules.

**Mouse / Not Cited**

*Neurobiology of aging* (2018; 70: 160)

"Brain regional synchronous activity predicts tauopathy in 3xTgAD mice."

Author(s): Liu D, Lu H, Stein E, Zhou Z, Yang Y, Mattson MP PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2018.06.016

MN1040 was used in Immunohistochemistry-immunofluorescence to demonstrate that age-related brain regional hypersynchronous activity is associated with early tau pathology in a mouse model.

**Human / 1:1,000**

*Journal of neuropathology and experimental neurology* (2006; 65: 602)

"Argyrophilic grain disease in demented subjects presenting initially with amnestic mild cognitive impairment."

Author(s): Jicha GA, Petersen RC, Knopman DS, Boeve BF, Smith GE, Geda YE, Johnson KA, Chia R, Delucia MW, Braak H, Dickson DW, Parisi JE PubMed Article URL: http://dx.doi.org/10.1097/01.jnen.0000225312.11858.57

MN1040 was used in immunohistochemistry to investigate the effect of physical exercise on pathogenesis of Alzheimer disease

**Mouse / 1:100**

*Journal of Alzheimer's disease : JAD* (2011; 24: 421)

"Physical exercise protects against Alzheimer's disease in 3xTg-AD mice."


MN1040 was used in Immunohistochemistry to study the expression of GGA1 and its effect on amyloid beta peptide

**Human / 1:250**


"GGA1 is expressed in the human brain and affects the generation of amyloid beta-peptide."

Author(s): Wahle T, Thal DR, Sastre M, Rentmeister A, Bogdanovic N, Famulok M, Heneka MT, Walter J PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.1982-06.2006

MN1040 was used in immunohistochemistry to study the effect of apoE4 on GABAergic interneurons and its role in learning and memory deficits in mice

**Mouse / 1:100**


"Apolipoprotein E4 causes age- and Tau-dependent impairment of GABAergic interneurons, leading to learning and memory deficits in mice."


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MN1040 was used in immunohistochemistry to investigate the relationship between memory complaints and Alzheimer disease pathology

Neurology ( 2006; 67: 1581)
"Memory complaints are related to Alzheimer disease pathology in older persons."
Author(s):Barnes LL,Schneider JA,Boyle PA,Bienias JL,Bennett DA
PubMed Article URL:http://dx.doi.org/10.1212/01.wnl.0000242734.16663.09

MN1040 was used in Immunohistochemistry to demonstrate for the first time that CSS can induce lasting, significant neural injury consistent with some, but not all, features of late onset AD.

Mouse / Not Cited
Sleep ( 2021; 44: )
"Late-in-life neurodegeneration after chronic sleep loss in young adult mice."
PubMed Article URL:http://dx.doi.org/10.1093/sleep/zsab057

MN1040 was used in Immunohistochemistry to investigate the effect of a novel immunotherapeutic method on Alzheimer disease treatment

Human / 1:500
Molecular therapy : the journal of the American Society of Gene Therapy ( 2010; 18: 1471)
"Abeta-directed single-chain antibody delivery via a serotype-1 AAV vector improves learning behavior and pathology in Alzheimer's disease mice."
Author(s):Ryan DA,Mastrangelo MA,Narrow WC,Sullivan MA,Federoff HJ,Bowers WJ
PubMed Article URL:http://dx.doi.org/10.1038/mit.2010.111

MN1040 was used in Immunohistochemistry-immunofluorescence to assessed whether tau and -amyloid (A) deposits might be present in pancreatic tissue of subjects with Alzheimer's disease, and whether amylin, an amyloidogenic protein deposited in the pancreas of T2DM patients, might accumulate in the brain of Alzheimer's disease patients.

Human / 1:200
Annals of neurology ( 2019; 86: 539)
"Amylin as a potential link between type 2 diabetes and alzheimer disease."
PubMed Article URL:http://dx.doi.org/10.1002/ana.25570

MN1040 was used in immunohistochemistry to characterize the age-dependent tau protein aggregation in frontal and entorhinal cortices

Human / Not Cited
Brain research. Developmental brain research ( 2005; 156: 42)
"Tau protein aggregation in the frontal and entorhinal cortices as a function of aging."
Author(s):Yang W,Ang LC,Strong MJ
PubMed Article URL:http://dx.doi.org/10.1016/j.devbrainres.2005.02.004

MN1040 was used in immunohistochemistry to investigate the effectiveness of carnosine for the treatment of Alzheimer disease in mice model

Human / 1:400
PloS one ( 2011; 6: )
"Effects of dietary supplementation of carnosine on mitochondrial dysfunction, amyloid pathology, and cognitive deficits in 3xTg-AD mice."
PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0017971

MN1040 was used in immunohistochemistry to study the neuropathology of patients with different degenerative pathologies

Human / 1:1,000
Brain : a journal of neurology ( 2007; 130: 1148)
"Rates of cerebral atrophy differ in different degenerative pathologies."
Author(s):Whitwell JL,Jack CR,Parisi JE,Knopman DS,Boeve BF,Petersen RC,Ferman TJ,Dickson DW,Josephs KA
PubMed Article URL:http://dx.doi.org/10.1093/brain/awm021

MN1040 was used in immunohistochemistry to characterize a new progranulin mutation and its role in tau, TDP43 and alpha-synuclein pathology

Human / 1:250
Brain : a journal of neurology ( 2007; 130: 1360)
"A novel progranulin mutation associated with variable clinical presentation and tau, TDP43 and alpha-synuclein pathology."
Author(s):Leverenz JB,Yu CE,Montine TJ,Steinbart E,Bekris LM,Zabetian C,Kwong LK,Lee VM,Schellenberg GD,Bird TD
PubMed Article URL:http://dx.doi.org/10.1093/brain/awm069


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MN1040 was used in Immunohistochemistry-immunofluorescence to show the role and interactions of lysosomal proteins Progranulin and Prosaposin in the brains of aged patients and those with Alzheimer's.

**Human / 1:2000**

Acta neuropathologica communications (2019; 7: )

"Characterization of lysosomal proteins Progranulin and Prosaposin and their interactions in Alzheimer’s disease and aged brains: increased levels correlate with neuropathology."

Author(s): Menesaikhan A, Toyoama I, Bellier JP, Serrano GE, Sue LI, Lue LF, Beach TG, Walker DG

PubMed Article URL:http://dx.doi.org/10.1186/s40478-019-0862-8

MN1040 was used in immunohistochemistry to study the Alzheimer disease-like clinical features and tau pathology in a familial prion disease

**Human / 1:250**

Annals of neurology (2011; 69: 712)

"Familial prion disease with Alzheimer disease-like tau pathology and clinical phenotype."

Author(s): Jayadev S, Nochlin D, Pooraj P, Steinbart EJ, Mastrianni JA, Montine TJ, Ghetti B, Schellenberg GD, Bird TD, Leverenz JB

PubMed Article URL:http://dx.doi.org/10.1002/ana.22264

MN1040 was used in immunohistochemistry to examine the expression of interleukin 18 in the brains of Alzheimer disease patients

**Human / Not Cited**

Neurobiology of aging (2009; 30: 198)

"Expression of interleukin-18 is increased in the brains of Alzheimer’s disease patients."

Author(s): Olaja J, Alafuzzof I, Herukka SK, van Groen T, Tanila H, Pirttilä T

PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2007.06.006

MN1040 was used in Immunohistochemistry to identify Fyn as a key regulator of tau pathology independently of A-induced toxicity.

**Mouse / 1:500**

Cell reports (2020; 32: )

"Fyn Kinase Controls Tau Aggregation In Vivo."

Author(s): Briner A, Götz J, Polanco JC

PubMed Article URL:http://dx.doi.org/10.1016/j.celrep.2020.108045

MN1040 was used in immunohistochemistry to study the Lewy body in Parkinson disease

**Human / Not Cited**

Parkinsonism & related disorders (2006; 12: 253)

"Cortical and amygdalar Lewy body burden in Parkinson's disease patients with visual hallucinations."

Author(s): Papapetropoulos S, McCorquodale DS, Gonzalez J, Jean-Gilles L, Mash DC

PubMed Article URL:http://dx.doi.org/10.1016/j.parkreldis.2005.10.005

MN1040 was used in immunohistochemistry to see that the granulin Alzheimer's disease risk variant has no significant effects on flornbetapir positron emission tomographic amyloid imaging and cerebrospinal fluid Abeta levels

**Human / 1:500**

Acta neuropathologica (2017; 133: 785)

"Opposing effects of progranulin deficiency on amyloid and tau pathologies via microglial TYROBP network."

Author(s): Takahashi H, Klein ZA, Bhagat SM, Kaufman AC, Kostylev MA, Ikezu M, Strittmatter SM

PubMed Article URL:http://dx.doi.org/10.1007/s00401-017-1668-z

MN1040 was used in immunohistochemistry to study the effect of alpha 7 nAChR activation on GSK3 and tau phosphorylation

**Mouse / 1:2000**

Brain research (2009; 1265: 65)

"Selective alpha7 nicotinic acetylcholine receptor activation regulates glycogen synthase kinase3beta and decreases tau phosphorylation in vivo."

Author(s): Bitner RS, Nikkel AL, Markosyan S, Otte S, Puttfarken P, Gopalakrishnan M

PubMed Article URL:http://dx.doi.org/10.1016/j.brainres.2009.01.069

MN1040 was used in immunohistochemistry to develop an imaging system for long-term monitoring of retinal fibrillar tau in P301S tau transgenic mice and to study whether retinal tau is diagnostic in Alzheimer's disease

**Human / 1:500**

PloS one (2013; 7: )

"Long-term in vivo imaging of fibrillar tau in the retina of P301S transgenic mice."


PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0053547
MN1040 was used in immunohistochemistry to evaluate the amyloid pathology in a new Alzheimer disease mouse model.

Mouse / Not Cited

"Early-onset and robust amyloid pathology in a new homozygous mouse model of Alzheimer's disease."
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0007931

Human / 1:1,000

MN1040 was used in immunohistochemistry to diagnose and classify frontotemporal lobar degenerations based on tau and ubiquitin immunostaining.

Human / 1:1,000

Annals of neurology (2005; 57: 480)
"Antemortem diagnosis of frontotemporal lobar degeneration."
Author(s): Knopman DS, Boeve BF, Parisi JE, Dickson DW, Smith GE, Ivnik RJ, Josephs KA, Petersen RC
PubMed Article URL: http://dx.doi.org/10.1002/ana.20425

Human / 1:1,000

MN1040 was used in immunohistochemistry to investigate the neuropathology of cognitively normal elderly.

Journal of neuropathology and experimental neurology (2003; 62: 1087)
"Neuropathology of cognitively normal elderly."
Author(s): Knopman DS, Parisi JE, Salvati A, Floriachi-Robert M, Boeve BF, Ivnik RJ, Smith GE, Dickson DW, Johnson KA, Petersen LE, McDonald WC, Braak H, Josephs KA
PubMed Article URL: http://dx.doi.org/10.1093/jnen/62.11.1087

Human / 1:1,000

MN1040 was used in immunohistochemistry to characterize the histological features of cognitive impaired patients associated with celiac disease.

Archives of neurology (2006; 63: 1440)
"Cognitive impairment and celiac disease."
Author(s): Hu WT, Murray JA, Greenaway MC, Parisi JE, Josephs KA
PubMed Article URL: http://dx.doi.org/10.1001/archneur.63.10.1440

Human / 1:1,000

MN1040 was used in immunohistochemistry to conduct neuropathologic analysis on frontotemporal lobar degeneration.

"Neuropathologic features of frontotemporal lobar degeneration with ubiquitin-positive inclusions with progranulin gene (PGRN) mutations."
PubMed Article URL: http://dx.doi.org/10.1097/nen.0b013e31803020cf

Human / 1:200

MN1040 was used in immunohistochemistry to investigate the effect of Abeta(1-42) on the survival of mOP cells in Alzheimer disease mouse model.

The American journal of pathology (2010; 177: 1422)
"Early oligodendrocyte/myelin pathology in Alzheimer's disease mice constitutes a novel therapeutic target."
Author(s): Desai MK, Mastrangelo MA, Ryan DA, Sudol KL, Narrow WC, Bowers WJ
PubMed Article URL: http://dx.doi.org/10.2353/ajpath.2010.100087

Mouse / Not Cited

Proceedings of the National Academy of Sciences of the United States of America (2018; 115: E1876)
"NAD+sup+<sup>+</sup> supplementation normalizes key Alzheimer's features and DNA damage responses in a new AD mouse model with introduced DNA repair deficiency."
PubMed Article URL: http://dx.doi.org/10.1073/pnas.1718819115

Mouse / Not Cited

MN1040 was used in Immunohistochemistry-immunofluorescence to examine the role of compromised cellular bioenergetics and DNA repair in the pathogenesis of Alzheimer's disease.

Journal of neuropathology and experimental neurology (2003; 62: 1087)
"Neuropathology of cognitively normal elderly."
Author(s): Knopman DS, Boeve BF, Parisi JE, Dickson DW, Smith GE, Ivnik RJ, Josephs KA, Petersen RC
PubMed Article URL: http://dx.doi.org/10.1093/jnen/62.11.1087

Mouse / Not Cited

MN1040 was used in Immunohistochemistry to evaluate the amyloid pathology in a new Alzheimer disease mouse model.

"In Vivo Detection of Gray Matter Neuropathology in the 3xTg Mouse Model of Alzheimer's Disease with Diffusion Tensor Imaging."
PubMed Article URL: http://dx.doi.org/10.3233/JAD-170136
MN1040 was used in Immunohistochemistry to suggest that impaired TREM2 signaling reduces microglia-mediated neurodegeneration in the setting of tauopathy.

**Human / 1:500**

The Journal of clinical investigation (2020; 130: 4954)

"Impact of TREM2R47H variant on tau pathology-induced gliosis and neurodegeneration."

Author(s): Gratuzue M, Leyns CE, Sauerbeck AD, St-Pierre M, Xiong M, Kim N, Serrano JR, Tremblay ME, Kummer TT, Colonna M, Ulrich JD, Holtzman DM

PubMed Article URL: http://dx.doi.org/10.1172/JCI138179

**Rat / 1:200**

MN1040 was used in immunohistochemistry to study the accumulation of amyloid and tau in the brains of aged hydrocephalic rats.

"Amyloid and Tau accumulate in the brains of aged hydrocephalic rats."

Author(s): Silverberg GD, Miller MC, Machan JT, Johanson CE, Caralopoulos IN, Pascale CL, Heile A, Klinge PM


**Mouse / 1:200**

MN1040 was used in Immunohistochemistry to suggest that electronegative-VLDL levels may represent a new therapeutic target for cognitive dysfunction.

"Electronegative very-low-density lipoprotein induces brain inflammation and cognitive dysfunction in mice."

Author(s): Lin YS, Liu CK, Lee HC, Chou MC, Ke LY, Chen CH, Chen SL

PubMed Article URL: http://dx.doi.org/10.1038/s41598-021-85502-0

**Human / 1:2,000**

Journal of neuropathology and experimental neuropathology (2010; 69: 918)

"TDP-43 proteinopathy and motor neuron disease in chronic traumatic encephalopathy."


PubMed Article URL: http://dx.doi.org/10.1097/NEN.0b013e3181ee7d85

**Mouse / Not Cited**

MN1040 was used in Immunohistochemistry to investigate the association of TSPO expression with pathology of Alzheimer disease.

"In vivo positron emission tomographic imaging of glial responses to amyloid-beta and tau pathologies in mouse models of Alzheimer's disease and related disorders."


PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.3076-10.2011

**Human / 1:100**


"Activity-Dependent Reconnection of Adult-Borne Dentate Granule Cells in a Mouse Model of Frontotemporal Dementia."


PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.2724-18.2019

**Human / 1:100**

MN1040 was used in ELISA, immunohistochemistry, and western blot to study the generation of oligomeric and phosphorylated forms of tau in a rat model of traumatic brain injury.

**Rat / 1:100**

The Journal of biological chemistry (2013; 288: 17042)

"Rapid accumulation of endogenous tau oligomers in a rat model of traumatic brain injury: possible link between traumatic brain injury and sporadic tauopathies."

Author(s): Hawkins BE, Krishnamurthy S, Castillo-Carranza DL, Sengupta U, Prough DS, Jackson GR, Dewitt DS, Kayed R

PubMed Article URL: http://dx.doi.org/10.1074/jbc.M113.472746

**Mouse / 1:200**

MN1040 was used in Immunohistochemistry to study the effect of A30P alpha synuclein on tau phosphorylation.

"Tau phosphorylation increases in symptomatic mice overexpressing A30P alpha-synuclein."

Author(s): Frasier M, Walzer M, McCarthy L, Magnuson D, Lee JM, Haas C, Kahle P, Wolozin B


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MN1040 was used in immunohistochemistry and western blot to study the increased tau phosphorylation following treatment with a mitochondrial complex I inhibitor in a tau transgenic mouse model.

**Mouse / 1:100**

"Annonacin, a natural lipophilic mitochondrial complex I inhibitor, increases phosphorylation of tau in the brain of FTDP-17 transgenic mice."


PubMed Article URL: http://dx.doi.org/10.1016/j.expneurol.2013.02.017

**Human / 2,000**


"Chronic traumatic encephalopathy in athletes: progressive tauopathy after repetitive head injury."

Author(s): McKee AC, Cantu RC, Nowinski CJ, Hedley-Whyte ET, Gavett BE, Hudson AE, Santini VE, Lee HS, Kubilius CA, Stern RA

PubMed Article URL: http://dx.doi.org/10.1097/NEN.0b013e3181a9d503

**Human / 1:10,000**

Acta neuropathologica (2005; 110: 135)

"Caspase-cleaved tau accumulation in neurodegenerative diseases associated with tau and alpha-synuclein pathology."

Author(s): Newman J, Risser MA, Sarsoza F, Klimas RC, Dick B, Bennett DA, Cotman CW, Rohn TT, Head E

PubMed Article URL: http://dx.doi.org/10.1093/brain/soo401-005-1027-3

**Human / Not Cited**


"Novel presenilin 1 mutation with profound neurofibrillary pathology in an indigenous Southern African family with early-onset Alzheimer's disease."

Author(s): Heckmann JM, Low WC, de Villiers C, Rutherford S, Vorster A, Rao H, Morris CM, Ramesar RS, Kalaria RN

PubMed Article URL: http://dx.doi.org/10.1093/brain/awv009

**Human / 1:500**

Brain: A Journal of Neurology (2017; 140: 2982)

"Presence of tau pathology within foetal neural allografts in patients with Huntington's and Parkinson's disease who had received foetal neural allografts."

Author(s): Cisbani G, Maxan A, Kordower JH, Planal E, Freeman TB, Cicchetti F

PubMed Article URL: http://dx.doi.org/10.1093/brain/awv255

**Human / Not Cited**

Movement disorders: official journal of the Movement Disorder Society (2010; 25: 1409)

"A novel X-linked four-repeat tauopathy with Parkinsonism and spasticity."


PubMed Article URL: http://dx.doi.org/10.1002/mds.23085

**Human / Not Cited**

Movement disorders: official journal of the Movement Disorder Society (2009; 24: 204)

"Expression of Lewy body protein septin 4 in postmortem brain of Parkinson's disease and control subjects."

Author(s): Sheikhdeh L, Mitsi G, Adi N, Bishopric N, Papapetropoulos S

PubMed Article URL: http://dx.doi.org/10.1002/mds.22306

**Human / Not Cited**

Movement disorders: official journal of the Movement Disorder Society (2004; 127: 133)

"Expression of tau pathology within foetal neural allografts in patients with Huntington's and Parkinson's disease."

Author(s): Newman J, Rissman MA, Sarsoza F, Klimas RC, Dick B, Bennett DA, Cotman CW, Rohn TT, Head E

PubMed Article URL: http://dx.doi.org/10.1093/brain/aww009

**Rat / Not Cited**

Journal of neuroinflammation (2010; 7: )

"Genetic background modifies neurodegeneration and neuroinflammation driven by misfolded human tau protein in rat model of tauopathy: implication for immunomodulatory approach to Alzheimer's disease."

Author(s): Stotzicka Z, Zilka N, Novak P, Kovacech B, Bugos O, Novak M

PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-7-64
MN1040 was used in immunohistochemistry to study the effect of quinolinic acid on tau phosphorylation in neurons.

Human / Not Cited

PloS one (2009; 4:)
"The excitotoxin quinolinic acid induces tau phosphorylation in human neurons."
Author(s): Rahman A, Ting K, Cullen KM, Brady N, Brew BJ, Guillemin GJ
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0006344

MN1040 was used in immunohistochemistry to investigate the effect of zinc for Alzheimer disease treatment.

Human / 1:400

Cell death & disease (2010; 1:)
"Dietary zinc supplementation of 3xTg-AD mice increases BDNF levels and prevents cognitive deficits as well as mitochondrial dysfunction."
PubMed Article URL: http://dx.doi.org/10.1038/cddis.2010.73

MN1040 was used in immunohistochemistry to identify a potential role for microglia in the degradation and clearance of pathological tau species in the brain.

Mouse / Not Cited

Scientific reports (2015; 5:)
"Microglial internalization and degradation of pathological tau is enhanced by an anti-tau monoclonal antibody."
PubMed Article URL: http://dx.doi.org/10.1038/srep11161

MN1040 was used in immunohistochemistry to study the role of the phospho-Tau pathway in the mechanism by which deficient macroautophagy promotes age-related neurodegeneration.

Mouse / Not Cited

Molecular neurodegeneration (2012; 7:)
"Macroautophagy deficiency mediates age-dependent neurodegeneration through a phospho-tau pathway."
Author(s): Ioue K, Rispoll J, Kaphzan H, Klaun E, Chen EI, Kim J, Komatsu M, Abeliovich A
PubMed Article URL: http://dx.doi.org/10.1186/1750-1326-7-48

MN1040 was used in Immunohistochemistry to show that repeated exposures of neonatal and old triple transgenic AD (3xTg) and non-transgenic (NonTg) mice to isoflurane (iso) distinctly increased neurodegeneration as measured by S100 levels, intracellular A, Tau oligomerization, and apoptotic markers.

Not Applicable / 1:400

PloS one (2020; 14:)
"Isoflurane mediated neuropathological and cognitive impairments in the triple transgenic Alzheimer's mouse model are associated with hippocampal synaptic deficits in an age-dependent manner."
Author(s): Joseph DJ, Liu C, Peng J, Liang G, Wei H
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0223509

MN1040 was used in immunohistochemistry to investigate the changes of brain structure in a patient with longstanding hypoparathyroidism.

Human / 1:200

"Bilateral striopallidodentate calcification (Fahr's syndrome) and multiple system atrophy in a patient with longstanding hypoparathyroidism."
Author(s): Preusser M, Kitzwoegerer M, Budka H, Brugger S
PubMed Article URL: http://dx.doi.org/10.1111/j.1440-1789.2007.00790.x

MN1040 was used in immunohistochemistry to study the potential involvement of pre-fibrillar tau in the defective plasticity of cortical dendritic spines observed in transgenic mice bearing the P301S tau mutation.

Mouse / 1:200

Acta neuropathologica communications (2013; 1:)
"Impaired plasticity of cortical dendritic spines in P301S tau transgenic mice."
Author(s): Hoffmann NA, Dorostkar MM, Blumenstock S, Goedert M, Herms J
PubMed Article URL: http://dx.doi.org/10.1002/ajnc.12164

MN1040 was used in immunohistochemistry to identify the effect of quinolinic acid on tau phosphorylation in neurons.

Human / 1:200

"Bilateral striopallidodentate calcification (Fahr's syndrome) and multiple system atrophy in a patient with longstanding hypoparathyroidism."
Author(s): Preusser M, Kitzwoegerer M, Budka H, Brugger S
PubMed Article URL: http://dx.doi.org/10.1111/j.1440-1789.2007.00790.x

MN1040 was used in immunohistochemistry to study the potential involvement of pre-fibrillar tau in the defective plasticity of cortical dendritic spines observed in transgenic mice bearing the P301S tau mutation.

Mouse / 1:200

Acta neuropathologica communications (2013; 1:)
"Impaired plasticity of cortical dendritic spines in P301S tau transgenic mice."
Author(s): Hoffmann NA, Dorostkar MM, Blumenstock S, Goedert M, Herms J
PubMed Article URL: http://dx.doi.org/10.1002/ajnc.12164

MN1040 was used in immunohistochemistry to study the ability of a GLP-1 analog to improve cognition in PS1-KI mice but not in 3xTg-AD mice.

Human / 1:100

Cell death & disease (2013; 4:)
"Exenatide promotes cognitive enhancement and positive brain metabolic changes in PS1-KI mice but has no effects in 3xTg-AD animals."
PubMed Article URL: http://dx.doi.org/10.1038/cddis.2013.139

MN1040 was used in immunohistochemistry to investigate the role of a truncated tau in Alzheimer disease pathogenesis in mice.

Journal of neuropathology and experimental neurology (2011; 70: 1006)
"Truncation of tau at E391 promotes early pathologic changes in transgenic mice."
Author(s): McMillian PJ, Kraemer BC, Robinson L, Leverenz JB, Raskind M, Schellenberg G
PubMed Article URL: http://dx.doi.org/10.1097/NEN.0b013e31823557f7

MN1040 was used in immunohistochemistry and western blot to show that ALOX5 upregulation results in homocysteine-dependent worsening of the Alzheimer's disease phenotype.

Scientific reports (2017; 7:)
"Five lipoxygenase hypomethylation mediates the homocysteine effect on Alzheimer's phenotype."
Author(s): Li JG, Barrero C, Merali S, Praticò D
PubMed Article URL: http://dx.doi.org/10.1038/srep46002

MN1040 was used in Immunohistochemistry-immunofluorescence to indicate that aging DPP6-KO mice have increased numbers of novel, abnormal presynaptic structures associated with several markers of Alzheimer's disease.

Acta neuropathologica communications (2020; 8:)
"A novel structure associated with aging is augmented in the DPP6-KO mouse brain."
Author(s): Lin L, Petralia RS, Lake R, Wang YX, Hoffman DA
PubMed Article URL: http://dx.doi.org/10.1186/s40478-020-01065-7

MN1040 was used in immunohistochemistry to study argyrophilic thorny astrocyte clusters in aphasias.

Acta neuropathologica (2007; 114: 347)
"Argyrophilic thorny astrocyte clusters in association with Alzheimer's disease pathology in possible primary progressive aphasias."
Author(s): Munoz DG, Woulfe J, Kertesz A
PubMed Article URL: http://dx.doi.org/10.1007/s00401-007-0266-x

MN1040 was used in immunohistochemistry to evaluate the neuroimmunoendocrine response toward forced physical exercise in 3xTg Alzheimer disease mice.

International journal of Alzheimer's disease (2010; 2010:)
"Gender-Specific Neuroimmunoendocrine Response to Treadmill Exercise in 3xTg-AD Mice."
Author(s): Giménez-Llort L, García Y, Buccieri K, Revilla S, Sunol C, Cristofol R, Santefiu C
PubMed Article URL: http://dx.doi.org/10.4061/2010/128354

MN1040 was used in immunohistochemistry to investigate the phenotypes of rats with overexpression of P301L tau in entorhinal cortex.

Behavioural brain research (2011; 216: 332)
"Focal expression of mutated tau in entorhinal cortex neurons of rats impairs spatial working memory."
Author(s): Ramírez JJ, Poulton WE, Knelson E, Barton C, King MA, Klein RL
PubMed Article URL: http://dx.doi.org/10.1016/j.bbr.2010.08.013

MN1040 was used in immunohistochemistry to study the temporoparietal atrophy in patients with Alzheimer disease.

Neurobiology of aging (2011; 32: 1531)
"Temporoparietal atrophy: a marker of AD pathology independent of clinical diagnosis."
Author(s): Whitwell JL, J., Jack CR, Przybelski SA, Parisi JE, Senjem ML, Boeve BF, Knopman DS, Petersen RC, Dickson DW, Josephs KA
PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2009.10.012

MN1040 was used in Immunohistochemistry to show the involvement of amylin, pancreatic-synuclein, A, PrP and tau in the complex pathophysiology of type two diabetes and in the appearance of insulin resistance in Alzheimer's and Parkinson's disease.

International journal of Alzheimer's disease (2010; 2010:)
"Mixed pathologies in pancreatic cells from subjects with neurodegenerative diseases and their interaction with prion protein."
Author(s): Martinez-Valbuena I, Valenti-Azcarate R, Amat-Villegas I, Marcilla I, Marti-Andres G, Caballero MC, Riverol M, Tuñon MT, Fraser PE, Luquin MR
PubMed Article URL: http://dx.doi.org/10.1186/s40478-021-01171-0


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Human / 1:1,000

"Neuropathology in the S305T tau gene mutation.

MN1040 was used in immunohistochemistry to study the neuropathology of S305S mutation in tau gene

Mouse / Not Cited

"Chronic Sleep Disruption Advances the Temporal Progression of Tauopathy in P301S Mutant Mice."

MN1040 was used in Immunohistochemistry to study whether chronic short sleep influences locus ceruleus neurons tau and the biochemical, neuroanatomical, and/or behavioural progression of tauopathy in male and female P301S mice.

Mouse / 1:250

"Mouse closed head traumatic brain injury replicates the histological tau pathology pattern of human disease: characterization of a novel model and systematic review of the literature."

MN1040 was used in Immunohistochemistry to compare the mouse closed-head traumatic brain injury model with human traumatic brain injury-associated tauopathy.

Cat / 1:500

"Ageing changes in cat brains demonstrated by beta-amyloid and AT8-immunoreactive phosphorylated tau deposits."

MN1040 was used in Immunohistochemistry to study the role of age and apoE in Alzheimer disease pathology

Human / 1:1,000

"Age and apoE associations with complex pathologic features in Alzheimer's disease."

MN1040 was used in Immunohistochemistry to study the role of lysosomal dysfunction in the accumulation of ganglioside-bound amyloid-beta peptide in Sandhoff disease

Mouse / 1:200

"Lysosomal dysfunction in a mouse model of Sandhoff disease leads to accumulation of ganglioside-bound amyloid-peptide."

MN1040 was used in Immunohistochemistry to indicate that Nrf2 regulation of autophagy-related genes likely plays a greater role in mediating the clearance of tau as an organism ages.

Human / 1:3,750

"Rapidly progressive neurodegenerative dementias."

MN1040 was used in Immunohistochemistry to study the neuropathology of patients with a neurodegenerative disease and a rapidly progressive course to death

Mouse / 1:1000

"Nr2f mediates the expression of BAG3 and autophagy cargo adaptor proteins and tau clearance in an age-dependent manner."

MN1040 was used in Immunohistochemistry to investigate the association between argyrophilic grains and atrophy

Human / 1:1,000

"Argyrophilic grains: a distinct disease or an additive pathology?"

MN1040 was used in Immunohistochemistry to study the age-dependent pathological changes in cat brains
MN1040 was used in immunohistochemistry to investigate the influence of endoplasmic reticulum stress on tau function and the pathogenesis of Alzheimer disease

Human / 1:200

"Endoplasmic reticulum stress induces tau pathology and forms a vicious cycle: implication in Alzheimer's disease pathogenesis."
PubMed Article URL:http://dx.doi.org/10.3233/JAD-2011-111037

Human / Not Cited

MN1040 was used in immunohistochemistry to compare the amyloid and neurofibrillary pathologic features in healthy, amnestic mild cognitive impairment, and Alzheimer disease cases

Human / 1:1,000

Archives of neurology (2006; 63: 665)
"Neuropathologic features of amnestic mild cognitive impairment."
Author(s):Petersen RC,Parisi JE,Dickson DW,Johnson KA,Knopman DS,Boeve BF,Jicha GA,lvnik RJ,Smith GE,Tangalos EG, Braak H,Kokmen E
PubMed Article URL:http://dx.doi.org/10.1001/archneur.63.5.665

Human / 1:1,000

Movement disorders : official journal of the Movement Disorder Society (2010; 25: 1246)
"Anatomical differences between CBS-corticobasal degeneration and CBS-Alzheimer's disease."
Author(s):Josephs KA,Whitwell JL,Boeve BF,Knopman DS,Petersen RC,Hu WT,Parisi JE,Dickson DW,Jack CR
PubMed Article URL:http://dx.doi.org/10.1002/mds.23062

Human / 1:1,000

MN1040 was used in immunohistochemistry to investigate the relation between beta-amyloid burden and brain atrophy

Human / 1:1000

Annals of neurology (2008; 63: 204)
"Beta-amyloid burden is not associated with rates of brain atrophy."
PubMed Article URL:http://dx.doi.org/10.1002/ana.21223

Human / 1:1000

MN1040 was used in immunohistochemistry to compare the gross pathology between CBS-corticobasal degeneration and CBS-Alzheimer disease

Human / 1:1000

Scientific reports (2021; 11:)
"NK1 antagonists attenuate tau phosphorylation after blast and repeated concussive injury."
Author(s):Corrigan F,Cernak I,McAteer K,Helenaewell SC,Rosenfeld JV,Turner RJ,Vink R
PubMed Article URL:http://dx.doi.org/10.1038/s41598-021-88237-0

Mouse / 1:250

"Suppression of Ins3 receptor-mediated Ca2+ signaling alleviates mutant presenilin-linked familial Alzheimer's disease pathogenesis."
Author(s):Shilling D,Müller M,Takano H,Mak DO,Abel T,Coulter DA,Foskett JK

Mouse / Not Cited

MN1040 was used in immunohistochemistry to evaluate intranasal and ocular nerve growth factor administration in mice

Mouse / Not Cited

"Delivery of NGF to the brain: intranasal versus ocular administration in anti-NGF transgenic mice."
Author(s):Capsorini S,Covaceuszach S,Ugolini G,Spirito F,Vignone D,Stefanini B,Amato G,Cattaneo A
PubMed Article URL:http://dx.doi.org/10.3233/JAD-2009-0953

Human / 1:200

MN1040 was used in immunohistochemistry to investigate the pathological changes in locus coeruleus of Alzheimer disease patients

Human / Not Cited

Neurobiology of aging (2007; 28: 327)
"Locus coeruleus neurofibrillary degeneration in aging, mild cognitive impairment and early Alzheimer's disease."
Author(s):Grudzien A,Shaw P,Weintraub S,Bigio E,Mash DC,Mesulam MM
PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2006.02.007


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**MN1040** was used in immunohistochemistry to study the effects of a small molecule microtubule-stabilizer on microtubule hyperdynamics, cognitive performance and pathology in tau transgenic mice.

**Human / 1:400**

**Neuropathology and applied neurobiology** (2010; 36:25)

"Population variation in oxidative stress and astrocyte DNA damage in relation to Alzheimer-type pathology in the ageing brain."  
PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2990.2009.01030.x

**Human / 1:1,000**

**Journal of neuropathology and experimental neurology** (2010; 69:405)

"Curcumin labeling of neuronal fibrillar tau inclusions in human brain samples."  
Author(s): Mohorko N, Repovs G, Popovi M, Kovacs GG, Bresjanac M  
PubMed Article URL: http://dx.doi.org/10.1097/NEN.0b013e3181d709eb

**Human / 1:100**

**Molecular and cellular neurosciences** (2008; 37: 559)

"Tau kinase inhibitors protect hippocampal synapses despite of insoluble tau accumulation."  
Author(s): Hinners I, Hill A, Otto U, Michalsky A, Mack TG, Striggow F  
PubMed Article URL: http://dx.doi.org/10.1016/j.mcn.2007.12.004
MN1040 was used in Immunohistochemistry to study total tau and phosphorylated tau as well as amyloid plaques in human brain tissue of Alzheimer's disease patients and controls.

Human / 1:200

Acta neuropathologica communications (2018; 6: )

"Phosphorylation of different tau sites during progression of Alzheimer's disease."


PubMed Article URL:http://dx.doi.org/10.1186/s40478-018-0557-6

Mouse / 1:200

MN1040 was used in immunohistochemistry to study the protective effects against anxiety, cognitive decline and disease pathology of a ketone ester diet in a murine model of Alzheimer's disease

Neurobiology of aging (2013; 34: 1530)

"A ketone ester diet exhibits anxiolytic and cognition-sparing properties, and lessens amyloid and tau pathologies in a mouse model of Alzheimer's disease."

Author(s):Kashiwaya Y, Bergman C, Lee JH, Wan R, King MT, Mughal MR, Okun E, Clarke K, Mattson MP, Veech RL

PubMed Article URL:http://dx.doi.org/10.1016/j.nurobiolaging.2012.11.023

Mouse / Not Cited

MN1040 was used in immunohistochemistry to study the dysregulation of gene expression and tau phosphorylation in MPS III B mice

Proceedings of the National Academy of Sciences of the United States of America (2009; 106: 8332)

"Sanfilippo syndrome type B, a lysosomal storage disease, is also a tauopathy."

Author(s):Ohmi K, Kudo LC, Ryazantsov S, Zhao HZ, Karsten SL, Neufeld EF

PubMed Article URL:http://dx.doi.org/10.1073/pnas.0903223106

Human / 1:200

Neuropathology and applied neurobiology (2009; 35: 46)

"Ultrastructural study of florid plaques in variant Creutzfeldt-Jakob disease: a comparison with amyloid plaques in kuru, sporadic Creutzfeldt-Jakob disease and Gerstmann-Sträussler-Scheinker disease."

Author(s):Silkorska B, Liberski PP, Sobow T, Budka H, Ironside JW

PubMed Article URL:http://dx.doi.org/10.1111/j.1365-2990.2008.00959.x

Human / 1:200

MN1040 was used in immunohistochemistry to investigate the florid plaques in variant Creutzfeldt-Jakob diseases

Not Applicable / 1:1000


"Cholinergic Surveillance over Hippocampal RNA Metabolism and Alzheimer's-Like Pathology."


PubMed Article URL:http://dx.doi.org/10.1093/cercor/bhw177

Mouse / Not Cited

MN1040 was used in immunohistochemistry to study the role of Tau phosphorylation in murine spermatogenesis during meiosis


"Site-specific phosphorylation of Tau protein is associated with deacetylation of microtubules in mouse spermatogenic cells during meiosis."


PubMed Article URL:http://dx.doi.org/10.1016/j.febslet.2014.04.021

13 Immunocytochemistry References

Species / Dilution

Summary

MN1040 was used in immunocytochemistry to investigate the beneficial effect of S-adenosyl methionine on the progression of Alzheimer disease neuropathology in a mouse model


"Diabetic supplementation with S-adenosyl methionine delayed amyloid- and tau pathology in 3xTg-AD mice."

Author(s):Lee S, Lemere CA, Frost JL, Shea TB

PubMed Article URL:http://dx.doi.org/10.3233/JAD-2011-111025

Human / 1:100

The Journal of biological chemistry (2012; 287: 32040)

"Interaction of endogenous tau protein with synaptic proteins is regulated by N-methyl-D-aspartate receptor-dependent tau phosphorylation."

Author(s):Mondragón-Rodríguez S, Trillaud-Doppia E, Dudilot A, Bourgeois C, Lauzon M, Leclerc N, Boehm J

PubMed Article URL:http:// dx.doi.org/10.1073/jbc.M112.401240
MN1040 was used in immunocytochemistry to study the prion protein accumulation in the Alzheimer disease brain


Author(s): Takahashi RH, Tobiume M, Sato Y, Sata T, Gouras GK, Takahashi H PubMed Article URL: http://dx.doi.org/10.1111/j.1440-1789.2010.01158.x

MN1040 was used in immunocytochemistry to investigate the changes of pRb phosphorylation in neurons of Alzheimer disease patients

Neurobiology of aging (2020; 89: 41) "Rho-kinase ROCK inhibitors reduce oligomeric tau protein.”


MN1040 was used in immunocytochemistry to investigate the changes of pRb phosphorylation in neurons of Alzheimer disease patients

International journal of clinical and experimental pathology (2008; 1: 134) "Retinoblastoma protein phosphorylation at multiple sites is associated with neurofibrillary pathology in Alzheimer disease.”


MN1040 was used in immunocytochemistry to report that expression of human wild-type tau is sufficient to disrupt the survival of dopaminergic neurons in a Drosophila model

Acta neuropathologica (2013; 125: 711) "Loss of vesicular dopamine release precedes tauopathy in degenerative dopaminergic neurons in a Drosophila model expressing human tau.”


MN1040 was used in immunocytochemistry to investigate the changes of gamma H2AX production in astrocytes of Alzheimer disease patients


MN1040 was used in immunocytochemistry to characterize the MEK1 protein in Alzheimer disease

Autophagy (2021; 17: 3491) "Decrease of neuronal FKBPs modulates perinuclear lysosomal positioning and MAPT/Tau behavior during MPTP/Tau-induced proteotoxic stress.”


MN1040 was used in immunocytochemistry to study the prion protein accumulation in the Alzheimer disease brain

Journal of neurochemistry (2003; 86: 136) "Distribution, levels, and activation of MEK1 in Alzheimer’s disease.”


MN1040 was used in immunocytochemistry to investigate the regulation of MAPK pathways during the progression of Alzheimer disease


Author(s): Zhu X, Castellani RJ, Takeda A, Nunomura A, Atwood CS, Perry G, Smith MA PubMed Article URL: http://dx.doi.org/10.1016/s0047-6374(01)00342-6
<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Human / 1:1,000</td>
<td>&quot;A sequence of cytoskeleton changes related to the formation of neurofibrillary tangles and neurofil threads.&quot; Author(s): Braak E, Braak H, Mandelkow EM. PubMed Article URL: <a href="http://dx.doi.org/10.1007/978-1-61779-328-8_3">http://dx.doi.org/10.1007/978-1-61779-328-8_3</a></td>
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<tr>
<td>Human / Not Cited</td>
<td>MN1040 was used in Immunohistochemistry - paraffin section and western blot to study tau phosphorylation and its direct increase by dexmedetomidine. Journal of Alzheimer's disease : JAD (2015; 44: 839) &quot;Dexmedetomidine directly increases tau phosphorylation.&quot; Author(s): Huang C, Ho YS, Ng OT, Irwin MG, Chang RC, Wong GT. PubMed Article URL: <a href="http://dx.doi.org/10.3233/JAD-142238">http://dx.doi.org/10.3233/JAD-142238</a></td>
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<tr>
<td>Human / Not Cited</td>
<td>MN1040 was used in Immunohistochemistry to investigate the correlation between the changes in the cytoskeleton and the formation of neurofibrillar tangles and neurofil threads. Journal of the neurological sciences (2017; 383: 142) &quot;Variable tau accumulation in murine models with abnormal prion protein deposits.&quot; Author(s): Piccardo P, King D, Brown D, Barron RM. PubMed Article URL: <a href="http://dx.doi.org/10.1016/j.jns.2017.10.040">http://dx.doi.org/10.1016/j.jns.2017.10.040</a></td>
</tr>
</tbody>
</table>
MN1040 was used in immunohistochemistry - paraffin section and western blot to determine the pathology in tau transgenic mice due to tau-targeting passive immunization

Not Applicable / Not Cited

Journal of neurochemistry (2015; 132: 135)
"Tau-targeting passive immunization modulates aspects of pathology in tau transgenic mice."
Author(s): Ittner A, Bertz J, Suh LS, Stevens CH, Gotz J, Ittner LM
PubMed Article URL: http://dx.doi.org/10.1111/jnc.12821

Mouse / 1:50

"Modulation of AD neuropathology and memory impairments by the iso prostane F2 is mediated by the thromboxane receptor."
Author(s): Lauretti E, Di Meco A, Chu J, Praticó D
PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2014.10.005

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Mouse / 1:500

Neurobiology of aging (2015; 36: 812)
"Impulsivity, decreased social exploration, and executive dysfunction in a mouse model of frontotemporal dementia."
Author(s): Van der Jeugd A, Vermaercke B, Halliday GM, Staufenbiel M, Götz J
PubMed Article URL: http://dx.doi.org/10.1016/j.nima.2016.01.007

Dog / 1:1000

The Journal of comparative neurology (2016; 524: 874)
"Tau hyperphosphorylation in synaptosomes and neuroinflammation are associated with canine cognitive impairment."
Author(s): Smolek T, Madari A, Farbakova J, Kandrac O, JadHAV S, Cente M, Brezovakova V, Novak M, Zilka N
PubMed Article URL: http://dx.doi.org/10.1002/jcn.23877

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"Pathological tau drives ectopic nuclear speckle scaffold protein SRRM2 accumulation in neuron cytoplasm in Alzheimer's disease."
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Mouse / 1:200

"Targeted Downregulation of dMyc Suppresses Pathogenesis of Human Neuronal Tauopathies in Mice by Limiting Heterochromatin Relaxation and Tau Hyperphosphorylation."
Author(s): Ohia-Nwoko O, Montazari S, Lau YS, Eriksen JL

MN1040 was used in immunohistochemistry - paraffin section and western blot to study suppression of pathogenesis of human neuronal tauopathies in drosophilia by limiting tau hyperphosphorylation and heterochromatin relaxation by targeted downregulation of dMyc.

Not Applicable / 1:1000

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"Targeted Downregulation of dMyc Suppresses Pathogenesis of Human Neuronal Tauopathies in Drosophila by Limiting Heterochromatin Relaxation and Tau Hyperphosphorylation."
Author(s): Chanhut S, Sarkar S
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Mouse / Not Cited

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PubMed Article URL: http://dx.doi.org/10.3233/JAD-160347

MN1040 was used in immunohistochemistry - paraffin section and western blot to determine the molecular and behavioral features of R3m4 transgenic mice expressing human non-mutated truncated tau protein and assess these mice as a model for Alzheimer’s disease.

Not Applicable / 1:500

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"Long-term treadmill exercise attenuates tau pathology in P301S tau transgenic mice."
Author(s): Ohia-Nwoko O, Montazari S, Lau YS, Eriksen JL

1 Immunohistochemistry (Frozen) References
### 1 Flow Cytometry References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast / 1:100</td>
<td>MN1040 was used in Flow cytometry/Cell sorting to show that yeast-displayed tau enables robust measurement of protein interactions and is of particular interest for characterizing conformational change.</td>
</tr>
</tbody>
</table>

### 1 Dot blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
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<tbody>
<tr>
<td>Mouse / 1:100</td>
<td>MN1040 was used in Western Blotting to indicate that VAMP8 could be used to increase tau and -synuclein clearance to prevent their intracellular accumulation.</td>
</tr>
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</table>

### 10 Miscellaneous PubMed References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
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</thead>
<tbody>
<tr>
<td>Mouse / 1:1000</td>
<td>MN1040 was used in western blot to examine the impact of type 2 diabetes on tau phosphorylation in diabetic mouse model.</td>
</tr>
</tbody>
</table>

MN1040 was used in western blot to assess tau-related behavior in a mouse model overexpressing the shortest human tau isoform in the brain.

**Human / Not Cited**

Journal of neuroscience research (2010; 88: 2727)  
"3R tau expression modifies behavior in transgenic mice."  
Author(s):Shiryaev N, Jouroukhin Y, Gozes I  
PubMed Article URL: http://dx.doi.org/10.1002/jnr.22431

MN1040 was used in Immuno-assay to demonstrate that motifs that are critical for tau conformation determine interaction with microtubules and subsequent pathological modifications.

**Human / Not Cited**

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**Human / Not Cited**

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**Human / 1:1000**

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MN1040 was used in western blot to elucidate the neuroprotective mechanism of statins.

**Human / Not Cited**

Neuroscience (2015; 294: 14)  
"Lovastatin suppresses the aberrant tau phosphorylation from FTDP-17 mutation and okadaic acid-induction in rat primary neurons."  
Author(s): Li R, Xu DE, Ma T  
PubMed Article URL: http://dx.doi.org/10.1016/j.neuroscience.2015.03.005

MN1040 was used in western blot to investigate the reactivity of isolated natural antibodies against tau protein.

**Human / Not Cited**

Journal of neuroimmunology (2015; 289: 121)  
"Identification and characterization of natural antibodies against tau protein in an intravenous immunoglobulin product."  
Author(s): Hromadikova L, Kolarova M, Jankovicova B, Bartos A, Rlcy J, Bilkova Z, Ripova D  
PubMed Article URL: http://dx.doi.org/10.1016/j.jneuroim.2015.10.017

### 4 Immunohistochemistry - Free Floating References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>MN1040 was used in immunohistochemistry - free floating to report the formation of mature tangles in Alzheimer's diseases is associated with excitatory cell loss and deficits in grid cell function.</td>
<td></td>
</tr>
</tbody>
</table>
| Mouse / 1:500 | **Neurodegeneration** (2017; 93: 533)  
"Tau Pathology Induces Excitatory Neuron Loss, Grid Cell Dysfunction, and Spatial Memory Deficits Reminiscent of Early Alzheimer’s Disease.”  
Author(s): Fu H, Rodriguez GA, Herman M, Emerini S, Nahmani E, Barrett G, Figueroa HY, Goldberg E, Hussaini SA, Duff KE  
PubMed Article URL: http://dx.doi.org/10.1016/j.neuron.2016.12.023

<table>
<thead>
<tr>
<th>Human / Not Cited</th>
<th>Summary</th>
</tr>
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<tbody>
<tr>
<td>MN1040 was used in immunohistochemistry - free floating to investigate the cerebral delivery of small interfering RNAs targeting human tau.</td>
<td></td>
</tr>
</tbody>
</table>
| Mouse / 1:500 | **Current gene therapy** (2015; 14: 343)  
"Tau silencing by siRNA in the P301S mouse model of tauopathy.”  
Author(s): Xu H, Rösler TW, Carlsson T, de Andrade A, Fiallo O, Hollerhage M, Oertel WH, Goedert M, Aigner A, Höglinger GU  
PubMed Article URL: http://dx.doi.org/10.2174/15665232140140926160602
<table>
<thead>
<tr>
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<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human / 1:500</td>
<td>MN1040 was used in immunohistochemistry - free floating to elucidate the cell types and mechanisms underlying TREM2's contribution to neurodegeneration.</td>
</tr>
<tr>
<td>Mouse / 1:1000</td>
<td>MN1040 was used in immunohistochemistry - free floating to assess the Src family kinase inhibitor, AZD0530, for treatment of Alzheimer's disease.</td>
</tr>
</tbody>
</table>
|                   | Annals of neurology (2015; 77: 953)  
**“Fyn inhibition rescues established memory and synapse loss in Alzheimer mice.”**  
Author(s): Kaufman AC, Salazar SV, Haas LT, Yang J, Kostylev MA, Jeng AT, Robinson SA, Gunther EC, van Dyck CH, Nygaard HB, Strittmatter SM  
PubMed Article URL: http://dx.doi.org/10.1002/ana.24394 |
|                   | Molecular neurodegeneration (2015; 10: )  
**“Analysis of in vivo turnover of tau in a mouse model of tauopathy.”**  
Author(s): Yamada K, Patel TK, Hochgräfe K, Mahan TE, Jiang H, Stewart FR, Mandelkow EM, Holtzman DM  
| 1 ELISA References | |
| Species / Dilution | Summary |
|                   | MN1040 was used in ELISA to study in vivo turnover of tau by use of a mouse model of tauopathy. |


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