

NMDAR1 Monoclonal Antibody (54.1)

Catalog Number32-0500

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Human, Mouse, Non-human primate, Rat
Host/Isotope	Mouse / IgG2a	Published species	Tag, Rat, Hamster, Fish, Mouse, Human, Not Applicable
Class	Monoclonal		
Type	Antibody	Tested Applications	Dilution *
Clone	54.1	ELISA (ELISA)	0.1-1 µg/mL
Immunogen	Fusion protein containing sequence from the intracellular loop between transmembrane regions III and IV of NMDAR1.	Immunohistochemistry (Paraffin) (IHC (P))	1:10-1:50
Conjugate	Unconjugated	Immunoprecipitation (IP)	1-3 µg/mL
Form	Liquid	Western Blot (WB)	1-5 µg/mL
Concentration	0.5 mg/mL	Immunocytochemistry (ICC/IF)	1:100
Purification	Protein A	Published Applications	
Storage buffer	PBS, pH 7.4	Western Blot (WB)	See 13 publications below
Contains	0.1% sodium azide	Immunohistochemistry (IHC)	See 5 publications below
Storage Conditions	-20°C	Immunoprecipitation (IP)	See 1 publications below
		Immunocytochemistry (ICC/IF)	See 3 publications below
		Immunohistochemistry - Free Floating (IHC (Free))	See 1 publications below
		Miscellaneous PubMed (Misc)	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

This antibody specifically recognizes the ~103 kDa NMDAR1 protein. Cross-reactivity with other NMDA receptor proteins has not been observed.

Background/Target Information

NMDAR1 encodes a protein that is a critical subunit of N-methyl-D-aspartate receptors, members of the glutamate receptor channel superfamily which are heteromeric protein complexes with multiple subunits arranged to form a ligand-gated ion channel. These subunits play a key role in the plasticity of synapses, which is believed to underlie memory and learning. Cell-specific factors are thought to control expression of different isoforms, possibly contributing to the functional diversity of the subunits. Alternatively spliced transcript variants have been described.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

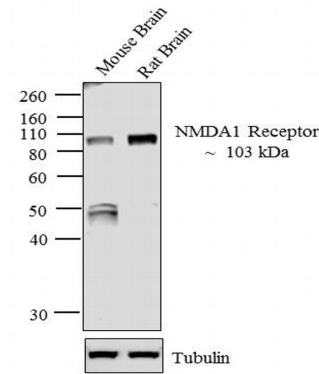
Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.

Product Images For NMDAR1 Monoclonal Antibody (54.1)

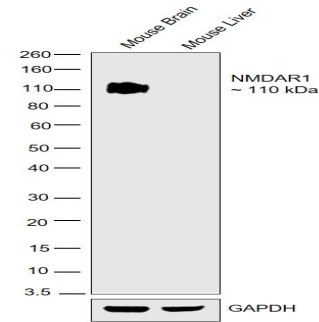
NMDAR1 Antibody (32-0500) in WB

Western blot analysis of NMDA 1 Receptor was performed by loading 30 µg of Mouse Brain (lane1) and Rat Brain (lane2) tissue lysate using Novex® NuPAGE® 12 % Bis-Tris gel (Product # NP0342BOX), XCell SureLock™ Electrophoresis System (Product # EI0002), Novex® Sharp Pre-Stained Protein Standard (LC5800), and Pierce™ Power Blotter System (22834). Proteins were transferred to a nitrocellulose membrane and blocked with 5 % skim milk at 4°C overnight. NMDA 1 Receptor was detected at ~103 kDa using NMDA 1 Receptor Mouse Monoclonal Antibody (Product # 32-0500) at 1-3 µg/mL in 5 % skim milk for 3 hours at room temperature on a rocking platform. Goat Anti-Mouse - HRP Secondary Antibody (Product # 62-6520) at 1:4000 dilution was used and chemiluminescent detection was performed using Pierce™ ECL Western Blotting Substrate (Product # 32106).



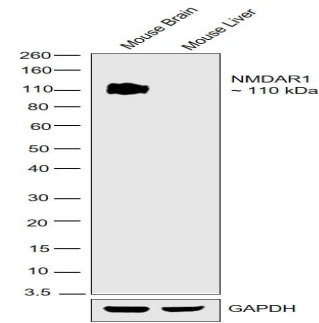
NMDAR1 Antibody (32-0500)

Antibody specificity was demonstrated by detection of differential basal expression of the target across Mouse Brain, Mouse Liver owing to their inherent genetic constitution. Relative expression of NMDAR1 was observed in Mouse Brain as compared to Mouse Liver using Anti-NMDAR1 Monoclonal Antibody (54.1) (Product # 32-0500) in Western Blot. {RE}



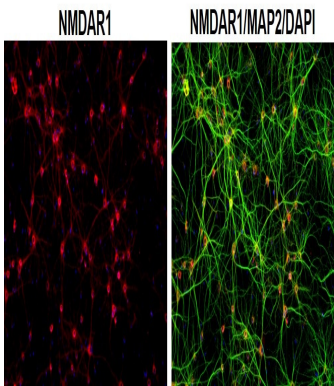
NMDAR1 Antibody (32-0500) in WB

Western blot was performed using Anti-NMDAR1 Monoclonal Antibody (54.1) (Product # 32-0500) and a 110k Da band corresponding to NMDAR1 was observed in Mouse Brain but not Mouse Liver. Tissue extracts (30 µg lysate) of Mouse Brain (Lane 1) or Mouse Liver (Lane 2) were electrophoresed using NuPAGE™ 10% Bis-Tris Protein Gel (Product # NP0301BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1: 1000) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177,1:4000) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



NMDAR1 Antibody (32-0500) in ICC/IF

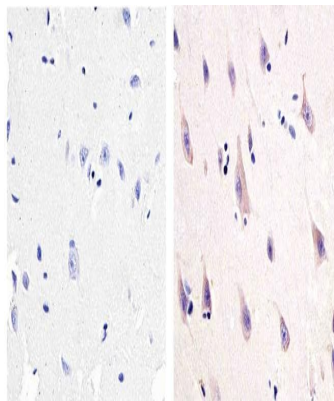
Immunofluorescent analysis of MAP2 (green) and NMDAR1 (red) on rat primary Hippocampal neurons (E18) (Product # A15587) cultured for 28 days in the B-27 Plus Neuronal Culture System (Product # A3653401). At day 28 the cells were fixed with 4% paraformaldehyde for 15 min, permeabilized with 0.1% triton x-100 for 30min, and blocked with 1% BSA for 30 min at room temperature. Cells were stained with anti-NMDAR1 antibody (Product # 32-0500) at a dilution of 1:100, and anti-MAP2 (Product # PA5-17646) at a dilution of 1:250, in 1% BSA staining buffer, overnight at 4C, and then incubated with Alexa Fluor 488 conjugated donkey anti-rabbit (Product # A-21206) and Alexa Fluor 594 donkey anti-mouse (Product # A-21203) antibodies at a dilution of 1:1000 for 30 min. at room temp. Wash 3 times with DPBS. Stain with DAPI for nucleus.



For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.

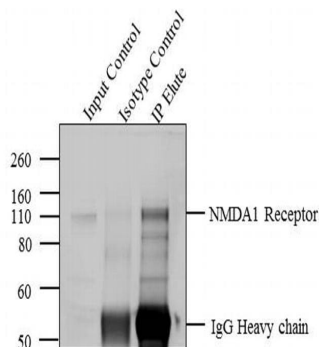


NMDAR1 Antibody (32-0500) in IHC (P)

Immunohistochemistry analysis of NMDA1 receptor showing staining in the cytoplasm and membrane of paraffin-embedded human brain tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10 mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature, washed with ddH₂O and PBS, and then probed with a NMDA1 receptor Mouse monoclonal antibody (Product # 32-0500) diluted in 3% BSA-PBS at a dilution of 1:20 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

NMDAR1 Antibody (32-0500) in IP

Immunoprecipitation of NMDA 1 Receptor was performed with 5 µg of the NMDA 1 Receptor Mouse Monoclonal Antibody (Product # 32-0500) on tissue extract from Rat Brain using the Dynabeads® Protein A Immunoprecipitation Kit (10006D). Normal Mouse IgG was used as a negative IP control. Subsequently, western blot analysis was performed using Novex® NuPAGE® 10 % Bis-Tris gel (Product # NP0301BOX), XCell SureLock™ Electrophoresis System (Product # EI0002), Novex® Sharp Pre-Stained Protein Standard (LC5800). Proteins were transferred using iBlot® 2 Dry Blotting System (IB21001) to a nitrocellulose membrane and blocked with 5% skim milk for 1 hour at room temperature on a rocking platform. NMDA 1 Receptor was detected at ~ 103 kDa using NMDA 1 Receptor Mouse Monoclonal Antibody (Product # 32-0500) at 1-3 µg/mL in 5 % skim milk at 4°C overnight on a rocking platform. Goat Anti-Mouse - HRP Secondary Antibody (Product # 62-6520) at 1:4000 dilution was used and chemiluminescent detection was performed using Pierce™ ECL Western Blotting Substrate (Product # 32106). Lane 1 represents 10 % of the total tissue extract (input), Lane 2 is the IP performed with Mouse IgG and Lane 3 represents IP performed with NMDA 1 Receptor Mouse Monoclonal Antibody (Product # 32-0500).



For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.

PubMed References For NMDAR1 Monoclonal Antibody (54.1)

13 Western Blot References

Species / Dilution	Summary
	32-0500 was used in Western Blotting to provide a mechanism for mGluR2/3 agonists against NMDAR hypofunction.
Rat / Not Cited	Neuropharmacology (2018; 137: 359) "Juvenile treatment with mGluR2/3 agonist prevents schizophrenia-like phenotypes in adult by acting through GSK3." Author(s):Xing B,Han G,Wang MJ,Snyder MA,Gao WJ PubMed Article URL: http://dx.doi.org/10.1016/j.neuropharm.2018.05.019
Rat / Not Cited	The Journal of neuroscience : the official journal of the Society for Neuroscience (2007; 27: 14171) "Differential trafficking of AMPA and NMDA receptors during long-term potentiation in awake adult animals." Author(s):Williams JM,Guévremont D,Mason-Parker SE,Luxmanan C,Tate WP,Abraham WC PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.2348-07.2007
Rat / 1:1000	32-0500 was used in Western Blotting to suggest that prior mephedrone exposure differentially alters ethanol reward in adolescent and adult rats. International journal of molecular sciences (2022; 23:) "Alteration of Ethanol Reward by Prior Mephedrone Exposure: The Role of Age and Matrix Metalloproteinase-9 (MMP-9)." Author(s):Grochecki P,Smaga I,Marszalek-Grabska M,Lopatynska-Mazurek M,Slowik T,Gibula-Tarlowska E,Kedzierska E, Listos J,Filip M,Kotlinska JH PubMed Article URL: http://dx.doi.org/10.3390/ijms23042122
Rat / Not Cited	32-0500 was used in western blot to measure the developmental expression of stargazin and AMPA receptor trafficking in the Genetic Absence Epilepsy Rats from Strasbourg model. Neurobiology of disease (2011; 42: 48) "Stargazin and AMPA receptor membrane expression is increased in the somatosensory cortex of Genetic Absence Epilepsy Rats from Strasbourg." Author(s):Kennard JT,Barmanray R,Sampurno S,Ozturk E,Reid CA,Paradiso L,D'Abaco GM,Kaye AH,Foote SJ,O'Brien TJ,Powell KL PubMed Article URL: http://dx.doi.org/10.1016/j.nbd.2011.01.003
Mouse / 1:5000	32-0500 was used in Western Blotting to suggest that KDM6B plays an essential role in cocaine-associated memory, which mainly acts through enhancing cocaine-induced synaptic plasticity in the mPFC. Neuropharmacology (2018; 141: 113) "The histone demethylase KDM6B in the medial prefrontal cortex epigenetically regulates cocaine reward memory." Author(s):Zhang YX,Akumuo RC,España RA,Yan CX,Gao WJ,Li YC PubMed Article URL: http://dx.doi.org/10.1016/j.neuropharm.2018.08.030
Human / 0.25 µg/ml	Proceedings of the National Academy of Sciences of the United States of America (1994; 91: 564) "Regional, cellular, and ultrastructural distribution of N-methyl-D-aspartate receptor subunit 1 in monkey hippocampus." Author(s):Siegel SJ,Brose N,Janssen WG,Gasic GP,Jahn R,Heinemann SF,Morrison JH PubMed Article URL: http://dx.doi.org/10.1073/pnas.91.2.564
Mouse / 1:2,000	32-0500 was used in Western Blotting to highlight the importance of PSD-95 during neurodevelopment in the mPFC and its potential link in the pathogenesis associated with schizophrenia and/or autism. Scientific reports (2019; 9:) "PSD-95 deficiency disrupts PFC-associated function and behavior during neurodevelopment." Author(s):Coley AA,Gao WJ PubMed Article URL: http://dx.doi.org/10.1038/s41598-019-45971-w
Rat / Not Cited	32-0500 was used in western blot to identify the long term electrophysiological, anatomical and molecular changes in a rat model of temporal lobe epilepsy. Neurobiology of disease (2011; 43: 312) "Long-term consequences of a prolonged febrile seizure in a dual pathology model." Author(s):Gibbs S,Chattopadhyaya B,Desgent S,Awad PN,Clerk-Lamalice O,Levesque M,Vianna RM,Rébillard RM, Delsemme AA,Hébert D,Tremblay L,Lepage M,Descarries L,Di Cristo G,Carmant L PubMed Article URL: http://dx.doi.org/10.1016/j.nbd.2011.02.013
Human / Not Cited	Brain research (1996; 723: 77) "Distribution of glutamate receptor subunit proteins GluR2(4), GluR5/6/7, and NMDAR1 in the canine and primate cerebral cortex: a comparative immunohistochemical analysis." Author(s):Hof PR,Vissavajhala P,Rosenthal RE,Fiskum G,Morrison JH PubMed Article URL: http://dx.doi.org/10.1016/0006-8993(96)00218-1

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.

320500 was used in western blot to determine the in vivo effects of pentobarbital on brain plasma membranes and lipid rafts

Biochimica et biophysica acta (2016; 1858: 2603)
"Pentobarbital modifies the lipid raft-protein interaction: A first clue about the anesthesia mechanism on NMDA and GABA_A receptors."
Author(s):Sierra-Valdez FJ,Ruiz-Suárez JC,Delint-Ramirez I
PubMed Article URL:<http://dx.doi.org/10.1016/j.bbamem.2016.07.011>

Neuropharmacology (2009; 56: 66)
"Increased expression, but not postsynaptic localisation, of ionotropic glutamate receptors during the late-phase of long-term potentiation in the dentate gyrus in vivo."
Author(s):Kennard JT,Guévremont D,Mason-Parker SE,Abraham WC,Williams JM
PubMed Article URL:<http://dx.doi.org/10.1016/j.neuropharm.2008.07.044>

32-0500 was used in Western Blotting to highlight the crucial role of histone posttranslational modifications for EphB2-GluN2B signals in isoflurane-associated PND, and modulating HDAC2 might be a new therapeutic strategy for isoflurane-associated PND.

Basic & clinical pharmacology & toxicology (2023; 132: 180)
"Isoflurane impairs GluN2B-containing NMDA receptors trafficking and cognition via decreasing histone acetylation and EphB2 expression in aged hippocampal neurons."
Author(s):Hao JR,Hu QM,Yang X,Wei P,Wang HY,Sun N,Gao C
PubMed Article URL:<http://dx.doi.org/10.1111/bcpt.13812>

Neuroscience (2003; 118: 1003)
"Long-term regulation of N-methyl-D-aspartate receptor subunits and associated synaptic proteins following hippocampal synaptic plasticity."
Author(s):Williams JM,Guévremont D,Kennard JT,Mason-Parker SE,Tate WP,Abraham WC
PubMed Article URL:[http://dx.doi.org/10.1016/s0306-4522\(03\)00028-9](http://dx.doi.org/10.1016/s0306-4522(03)00028-9)

5 Immunohistochemistry References

Species / Dilution Summary

The Journal of comparative neurology (1998; 395: 523)
"Light and electron microscopic distribution of the AMPA receptor subunit, GluR2, in the spinal cord of control and G86R mutant superoxide dismutase transgenic mice."
Author(s):Morrison BM,Janssen WG,Gordon JW,Morrison JH
PubMed Article URL:<http://www.ncbi.nlm.nih.gov/pubmed/9619504>

32-0500 was used in Immunohistochemistry to provide evidence of differential expression and activity of synaptic molecules during the retrieval and extinction of aversive memories of opiate withdrawal.

Biomedicines (2022; 10:)
"Molecular Mechanisms Underlying the Retrieval and Extinction of Morphine Withdrawal-Associated Memories in the Basolateral Amygdala and Dentate Gyrus."
Author(s):Franco-García A,Fernández-Gómez FJ,Gómez-Murcia V,Hidalgo JM,Milanés MV,Núñez C
PubMed Article URL:<http://dx.doi.org/10.3390/biomedicines10030588>

Brain research (1996; 723: 77)
"Distribution of glutamate receptor subunit proteins GluR2(4), GluR5/6/7, and NMDAR1 in the canine and primate cerebral cortex: a comparative immunohistochemical analysis."
Author(s):Hof PR,Vissavajhala P,Rosenthal RE,Fiskum G,Morrison JH
PubMed Article URL:[http://dx.doi.org/10.1016/0006-8993\(96\)00218-1](http://dx.doi.org/10.1016/0006-8993(96)00218-1)

32-0500 was used in Immunohistochemistry to gain insight into the mechanisms that govern the constituents of postsynaptic supercomplexes and the diversity of synapse types.

Journal of neurochemistry (2017; 142: 504)
"Hierarchical organization and genetically separable subfamilies of PSD95 postsynaptic supercomplexes."
Author(s):Frank RAW,Zhu F,Komiyama NH,Grant SGN
PubMed Article URL:<http://dx.doi.org/10.1111/jnc.14056>

The Journal of neuroscience : the official journal of the Society for Neuroscience (1994; 14: 3620)
"Androgenic regulation of tubulin gene expression in axotomized hamster facial motoneurons."
Author(s):Jones KJ,Oblinger MM
PubMed Article URL:<http://dx.doi.org/10.1523/JNEUROSCI.14-06-03620.1994>

1 Immunoprecipitation References

Species / Dilution Summary

Rat / Not Cited

Rat / Not Cited

Mouse / 1:1000

Mouse / Not Cited

Mouse / Not Cited

Rat / 1:100

Human / Not Cited

Mouse / Not Cited

Hamster / Not Cited

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.

32-0500 was used in Immunoprecipitation to conclude that although the PIN of the glutamatergic post-synapse is expressed widely throughout the brain, its activity-dependent dynamics show remarkable stimulus-specific and brain-region-specific diversity.

Mouse / Not Cited

Cell reports (2021; 37:)
"Synaptic protein interaction networks encode experience by assuming stimulus-specific and brain-region-specific states."
 Author(s):Lautz JD,Tsegay KB,Zhu Z, Gniffke EP,Welsh JP,Smith SEP
 PubMed Article URL:<http://dx.doi.org/10.1016/j.celrep.2021.110076>

3 Immunocytochemistry References

Species / Dilution	Summary
Mouse / Not Cited	The Journal of neuroscience : the official journal of the Society for Neuroscience (2005; 25: 3560) "Shank expression is sufficient to induce functional dendritic spine synapses in aspiny neurons." Author(s):Roussignol G,Ango F,Romorini S,Tu JC,Sala C,Worley PF,Bockaert J,Fagni L PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.4354-04.2005
Mouse / Not Cited	PloS one (2012; 6:) "NMDA receptors mediate synaptic competition in culture." Author(s):She K,Craig AM PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0024423
Mouse / 1:1,500	32-0500 was used in immunocytochemistry to assess the role of the GluN2B subunit during development and in synaptic plasticity The Journal of neuroscience : the official journal of the Society for Neuroscience (2015; 35: 8462) "GluN2B-Containing NMDA Receptors Regulate AMPA Receptor Traffic through Anchoring of the Synaptic Proteasome." Author(s):Ferreira JS,Schmidt J,Rio P,Águas R,Rooyackers A,Li KW,Smit AB,Craig AM,Carvalho AL PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.3567-14.2015

1 Immunohistochemistry - Free Floating References

Species / Dilution	Summary
Tag / 1:1000 Rat / 1:1000 Fish / 1:1000	The Journal of experimental biology (2010; 213: 2700) "The importance of N-methyl-D-aspartate (NMDA) receptors in subtraction of electrosensory reafference in the dorsal nucleus of skates." Author(s):Zhang Z,Bodznick D PubMed Article URL: http://dx.doi.org/10.1242/jeb.041186

1 Miscellaneous PubMed References

Species / Dilution	Summary
Human / Not Cited	32-0500 was used in western blot to study synaptosomal associated protein 25 kDa immunoreactivity in the hippocampus of patients with schizophrenia. Progress in neuro-psychopharmacology & biological psychiatry (2003; 27: 411) "SNAP-25 reduction in the hippocampus of patients with schizophrenia." Author(s):Thompson PM,Egbufoama S,Vawter MP PubMed Article URL: http://dx.doi.org/10.1016/S0278-5846(03)00027-7

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is 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.