

# GFAP Monoclonal Antibody (GA5), eBioscience™

## Product Details

Size	100 µg
Species Reactivity	Chicken, Human, Mouse, Pig, Rabbit, Rat
Published Species	Rat, Human, Mouse
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	GA5
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_10598206

Applications	Tested Dilution	Publications
Western Blot (WB)	0.5-5 µg/mL	3 Publications
Immunohistochemistry (IHC)	-	19 Publications
Immunohistochemistry (Paraffin) (IHC (P))	5 µg/mL	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	-	4 Publications
Immunocytochemistry (ICC/IF)	5 µg/mL	8 Publications
Flow Cytometry (Flow)	Assay-Dependent	4 Publications

## Product Specific Information

**Description:** This GA5 monoclonal antibody reacts with human, mouse, rat, chicken, rabbit, and pig glial fibrillary acidic protein (GFAP). This 49-kDa type III intermediate filament protein is expressed in neural tissues and distinguishes astrocytes from other glial cells during central nervous system development. Three alternative splice variants of GFAP exist; however, alpha-GFAP is the predominant form expressed in astrocytes. GFAP can co-assemble with vimentin and nestin in astrocytes, but such associations are not required for assembly. Like other intermediate filaments, GFAP assembly is dependent on phosphorylation and dephosphorylation of the N-terminal domain. Studies have demonstrated that mutations in the GFAP gene lead to Alexander disease. Moreover, GFAP has also been shown to be overexpressed in certain glial-derived tumors.

**Applications Reported:** This GA5 antibody has been reported for use in immunocytochemistry, western blotting, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, and flow cytometric analysis.

**Applications Tested:** This GA5 antibody has been tested by immunoblotting of lysate prepared from mouse brain, immunocytochemistry of fixed and permeabilized C6 cells, and immunohistochemistry of FFPE human tissue using low pH antigen retrieval. This can be used at less than or equal to 5 µg/mL.

**Purity:** Greater than 90%, as determined by SDS-PAGE.

**Aggregation:** Less than 10%, as determined by HPLC.

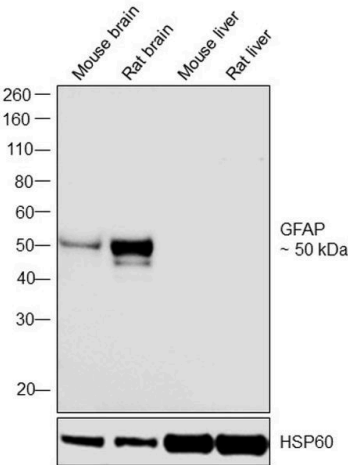


Filtration: 0.2 µm post-manufacturing filtered.



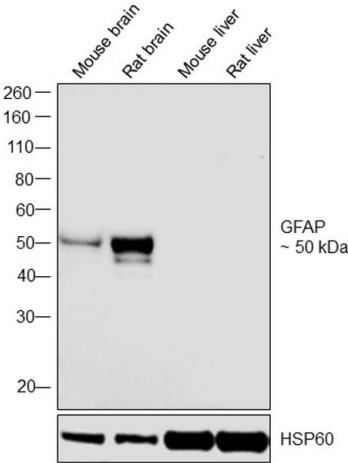
GFAP Antibody (14-9892-82)

Antibody specificity was demonstrated by detection of differential basal expression of the target across tissue tested owing to their inherent genetic constitution. Relative expression of GFAP was observed in Mouse brain, Rat brain in comparison to Mouse liver and Rat liver using Anti-GFAP Monoclonal Antibody (GA5), eBioscience™(Product # 14-9892-82) in Western Blot. {RE}



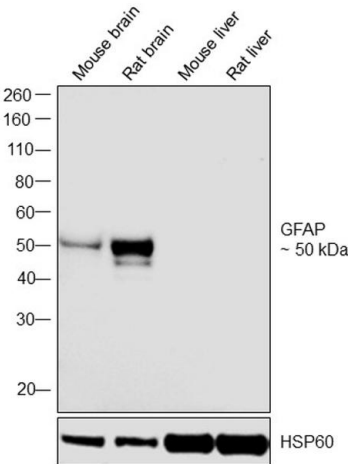
GFAP Antibody (14-9892-82) in WB

Western blot was performed using Anti-GFAP Monoclonal Antibody (GA5), eBioscience™(Product # 14-9892-82) and a 50 kDa band corresponding to GFAP was observed across tissues tested except Mouse and Rat liver. Whole cell extracts (30 µg lysate) of Mouse brain (Lane 1), Rat brain (Lane 2), Mouse liver (Lane 3) and Rat liver (Lane 4) were electrophoresed using Novex® NuPAGE® 4-12 % Bis-Tris gel (Product # NP0321BOX). 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 (0.5 µg/ml) and detected by chemiluminescence Goat anti-Mouse IgG (H+L), Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



GFAP Antibody (14-9892-82) in WB

Western blot was performed using Anti-GFAP Monoclonal Antibody (GA5), eBioscience™(Product # 14-9892-80) and a 50 kDa band corresponding to GFAP was observed across tissues tested except Mouse and Rat liver. Whole cell extracts (30 µg lysate) of Mouse brain (Lane 1), Rat brain (Lane 2), Mouse liver (Lane 3) and Rat liver (Lane 4) were electrophoresed using Novex® NuPAGE® 4-12 % Bis-Tris gel (Product # NP0321BOX). 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 (0.5 ug/ml) and detected by chemiluminescence Goat anti-Mouse IgG (H+L), Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).





39 References

Western Blot (3)

Frontiers in psychiatry	Year 2021
Plasma Levels of Neuron- and Astrocyte-Derived Exosomal Amyloid Beta1-42, Amyloid Beta1-40, and Phosphorylated Tau Levels in Schizophrenia Patients and Non-psychiatric Comparison Subjects: Relationships With Cognitive Functioning and Psychopathology.	Species Human
"Published figure using GFAP monoclonal antibody (Product # 14-9892-82) in Western Blot"	Dilution 1:1000
Authors: Lee EE,Winston-Gray C,Barlow JW,Rissman RA,Jeste DV	

Neural regeneration research	Year 2020
Muscovite nanoparticles mitigate neuropathic pain by modulating the inflammatory response and neuroglial activation in the spinal cord.	Species Mouse
"Published figure using GFAP monoclonal antibody (Product # 14-9892-82) in Immunohistochemistry (Frozen)"	Dilution 1:500
Authors: Oh JY,Hwang TY,Jang JH,Park JY,Ryu Y,Lee H,Park HJ	

View more WB references on thermofisher.com

Immunohistochemistry (19)

International journal of molecular sciences	Year 2022
Inhibition of Calpain Attenuates Degeneration of Substantia Nigra Neurons in the Rotenone Rat Model of Parkinson's Disease.	Species Rat
"14-9892-82 was used in Immunohistochemistry to find that both isoforms are activated in a nigrostriatal pathway with increased phosphorylated synuclein following the administration of rotenone in Lewis rats, but calpain isoforms played different roles in neuronal survival."	
Authors: Zaman V,Drasites KP,Myatich A,Shams R,Shields DC,Matzelle D,Haque A,Banik NL	

Frontiers in immunology	Year 2022
Glial receptor PLXNB2 regulates schizophrenia-related stress perception <i>via</i> the amygdala.	
"Published figure using GFAP monoclonal antibody (Product # 14-9892-82) in Immunohistochemistry"	
Authors: Xuan FL,Yan L,Li Y,Fan F,Deng H,Gou M,Chithanathan K,Heinla I,Yuan L,Seppa K,Zharkovsky A,Kalda A,Hong LE,Hu GF,Tan Y,Tian L	

View more IHC references on thermofisher.com

More applications with references on thermofisher.com

- IHC (P) (1)
- IHC (F) (4)
- ICC/IF (8)
- Flow (4)

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