Anti-GFAP Antibody [PSH10-24]

HA601380

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-Fr, IHC-P
Molecular Wt:	Predicted band size: 50 kDa
Clone number:	PSH10-24

Description: Glial fibrillary acidic protein (GFAP) is a protein that is encoded by the GFAP gene in humans. It is a type III intermediate filament (IF) protein that is expressed by numerous cell types of the central nervous system (CNS), including astrocytes and ependymal cells during development. GFAP has also been found to be expressed in glomeruli and peritubular fibroblasts taken from rat kidneys, Leydig cells of the testis in both hamsters and humans, human keratinocytes, human osteocytes and chondrocytes and stellate cells of the pancreas and liver in rats. GFAP is closely related to the other three non-epithelial type III IF family members, vimentin, desmin and peripherin, which are all involved in the structure and function of the cell's cytoskeleton. GFAP is thought to help to maintain astrocyte mechanical strength as well as the shape of cells, but its exact function remains poorly understood, despite the number of studies using it as a cell marker.

Immunogen: Synthetic peptide within human GFAP aa 383-432.

Positive control: Human brain tissue lysate, Mouse brain tissue lysate, Rat brain tissue lysate, Rat cerebellum tissue lysate, human brain tissue, mouse brain tissue, mouse hippocampus tissue, mouse cerebellum tissue, rat brain tissue, rat cerebellum tissue.

Subcellular location: Cytoplasm.

Database links: SwissProt: P14136 Human | P03995 Mouse | P47819 Rat

Recommended Dilutions:

WB	1:2,000
IHC-Fr	1:500
IHC-P	1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

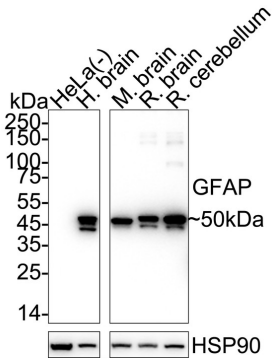

Fig1: Western blot analysis of GFAP on different lysates with Mouse anti-GFAP antibody (HA601380) at 1/2,000 dilution.

Lane 1: HeLa cell lysate (negative)
Lane 2: Human brain tissue lysate
Lane 3: Mouse brain tissue lysate
Lane 4: Rat brain tissue lysate
Lane 5: Rat cerebellum tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 50 kDa
Observed band size: 50 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601380) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

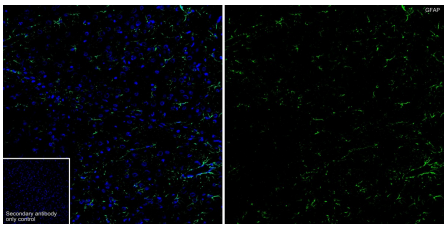

Fig2: Immunofluorescence analysis of frozen rat brain tissue with Mouse anti-GFAP antibody (HA601380) at 1/500 dilution.

The section was not undergone antigen retrieval. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA601380, green) at 1/500 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

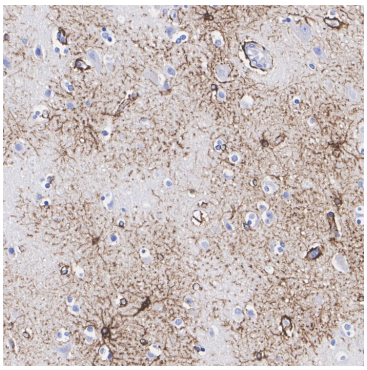

Fig3: Immunohistochemical analysis of paraffin-embedded human brain tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

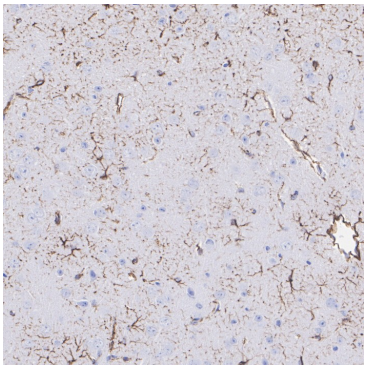

Fig4: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

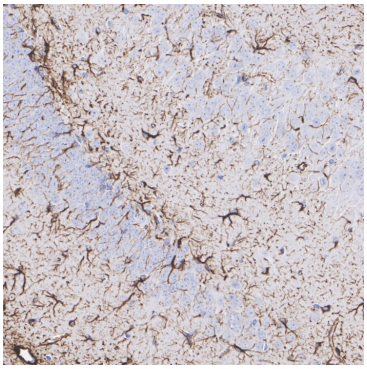

Fig5: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

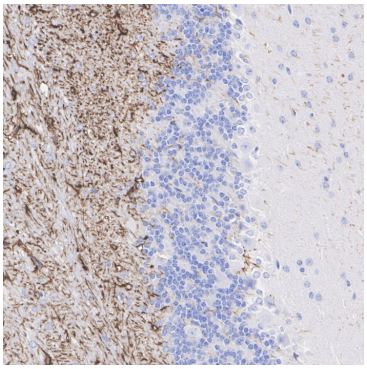

Fig6: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

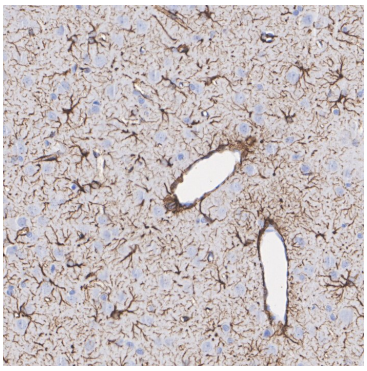

Fig7: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

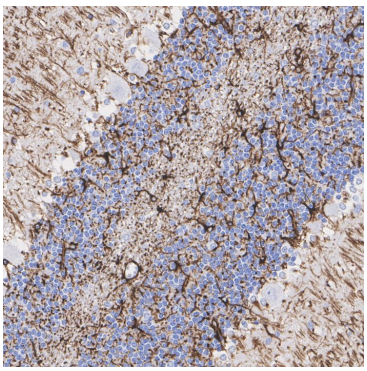

Fig8: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Mouse anti-GFAP antibody (HA601380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Kim KY et al. GFAP as a Potential Biomarker for Alzheimer's Disease: A Systematic Review and Meta-Analysis. Cells. 2023 May
2. Abdelhak A et al. Blood GFAP as an emerging biomarker in brain and spinal cord disorders. Nat Rev Neurol. 2022 Mar