GFAP Recombinant Antibody [SA03-04] - Rat IgG1 (Chimeric)

HA601483

Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	IHC-Fr, IHC-P, WB, mIHC
Molecular Wt:	Predicted band size: 50 kDa
Clone number:	SA03-04

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 1-50 / 432.

Positive control: Human brain tissue, rat brain tissue, Mouse brain tissue lysate, Rat brain tissue lysate.

Subcellular location: Cytoplasm

Database links: SwissProt: P03995 Mouse | P47819 Rat

Recommended Dilutions:

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

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

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

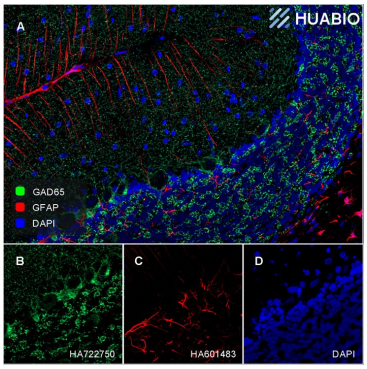

Fig1: Application: IHC-Fr

Species: Rat

Site: cerebellum

Sample: Frozen section

Antibody concentration: 1/1,000 (GFAP, HA601483, Rat, red); 1/500 (GAD65, HA722750, Rabbit, green)

Antigen retrieval: Not required

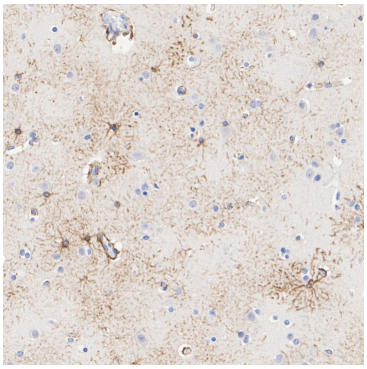

Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rat anti-GFAP antibody (HA601483) at 1/500 dilution.

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 (HA601483) at 1/500 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.

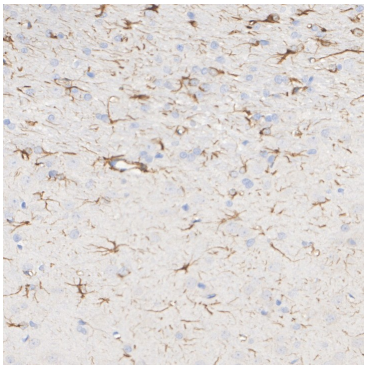

Fig3: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rat anti-GFAP antibody (HA601483) at 1/500 dilution.

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 (HA601483) at 1/500 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.

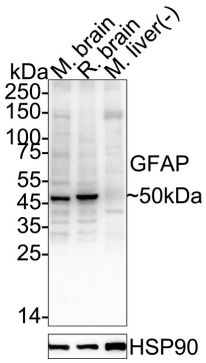

Fig4: Western blot analysis of GFAP on different lysates with Rat anti-GFAP antibody (HA601483) at 1/2,000 dilution.

Lane 1: Mouse brain tissue lysate
Lane 2: Rat brain tissue lysate
Lane 3: Mouse liver tissue lysate (negative)

Lysates/proteins at 20 µg/Lane.

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

Exposure time: 1 minute; 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 (HA601483) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/50,000 dilution was used for 1 hour at room temperature.

Background References

1. Zhang N et al. A self-assembly peptide nanofibrous scaffold reduces inflammatory response and promotes functional recovery in a mouse model of intracerebral hemorrhage. Nanomedicine N/A:N/A (2016).
2. Green AL et al. Preclinical antitumor efficacy of selective exportin 1 inhibitors in glioblastoma. Neuro Oncol 17:697-707 (2015).