

## GFAP

Cat.No. 173 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

## Data Sheet

Reconstitution/Storage	100 µl antiserum, lyophilized. For reconstitution add 100 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 up to 1 : 5000 (AP staining) <b>IP:</b> yes <b>ICC:</b> 1 : 500 up to 1 : 1000 <b>IHC:</b> 1 : 200 up to 1 : 500 <b>IHC-P/FFPE:</b> 1 : 200 up to 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 432 from human GFAP (UniProt Id: P14136)
Reactivity	Reacts with: human (P14136), rat (P47819), mouse (P03995), chicken, sheep. Other species not tested yet.
Specificity	Specific for GFAP.
matching control	173-0P

### TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Glial fibrillary acidic protein **GFAP** is a glial-specific member of the intermediate filament protein family. This group comprises celltype-specific filamentous proteins with similar structure and function as scaffold for cytoskeleton assembly and maintenance.

Frequently, neural stem cells also express GFAP. In addition many types of brain tumors, probably derived from astrocytic cells, heavily express GFAP. This protein is also found in the lens epithelium, Kupffer cells of the liver, in some cells in salivary tumors and others.

Point-mutations in the GFAP gene have been correlated to Alexander disease a fatal leukoencephalopathy that leads to the dysmyelination or demyelination of the central nervous system.

## Selected References SYSY Antibodies

- Fc gamma receptors are expressed in the developing rat brain and activate downstream signaling molecules upon cross-linking with immune complex.  
Stamou M, Grodzki AC, van Oostrum M, Wollscheid B, Lein PJ  
Journal of neuroinflammation (2018) 15(1): 7. **ICC, FACS; tested species: rat**
- Tanycytes and a differential fatty acid metabolism in the hypothalamus.  
Hofmann K, Lamberz C, Piotrowitz K, Offermann N, But D, Scheller A, Al-Amoudi A, Kuerschner L  
Glia (2017) 65(2): 231-249. **IHC, WB; tested species: mouse**
- Translocator protein ligand protects against neurodegeneration in the MPTP mouse model of Parkinsonism.  
Gong J, Szegő EM, Leonov A, Benito E, Becker S, Fischer A, Zweckstetter M, Outeiro T, Schneider A  
The Journal of neuroscience : the official journal of the Society for Neuroscience (2019) : . **IHC; tested species: mouse**
- Neuropathological findings suggestive for a stroke in an alpaca (*Vicugna pacos*).  
Schöniger S, Schütze E, Michalski D, Puchta J, Kaiser M, Härtig W  
Acta veterinaria Scandinavica (2019) 61(1): 1. **IHC**
- Obesity-Induced Cellular Senescence Drives Anxiety and Impairs Neurogenesis.  
Ogrodnik M, Zhu Y, Langhi LGP, Tchonia T, Krüger P, Fielder E, Victorelli S, Ruswhandi RA, Giorgadze N, Pirtskhalava T, Podgorni O, et al.  
Cell metabolism (2018) : . **IHC; tested species: mouse**
- Glycoprotein NMB: a novel Alzheimer's disease associated marker expressed in a subset of activated microglia.  
Hüttenrauch M, Ogorek I, Klafki H, Otto M, Stadelmann C, Weggen S, Wiltfang J, Wirths O  
Acta neuropathologica communications (2018) 6(1): 108. **IHC; tested species: mouse**
- Hypoxia activates a neuropeptidergic pathway from the paraventricular nucleus of the hypothalamus to the nucleus tractus solitarius.  
Ruyle BC, Klutho PJ, Baines CP, Heesch CM, Hasser EM  
American journal of physiology. Regulatory, integrative and comparative physiology (2018) : . **IHC; tested species: rat**
- Radial glial elements in the cerebral cortex of the lesser hedgehog tenrec.  
Mack AF, Künzle H, Lange M, Mages B, Reichenbach A, Härtig W  
Brain structure & function (2018) : . **IHC**
- Reduced Smoothed level rescued Aβ-induced memory deficits and neuronal inflammation in animal models of Alzheimer's disease.  
Ma W, Wu M, Zhou S, Tao Y, Xie Z, Zhong Y  
Journal of genetics and genomics = Yi chuan xue bao (2018) : . **IHC; tested species: mouse**
- SUMO1-conjugation is altered during normal aging but not by increased amyloid burden.  
Stankova T, Piepkorn L, Bayer TA, Jahn O, Tirard M  
Aging cell (2018) : e12760. **WB; tested species: mouse**
- Neurovascular Specifications in the Alzheimer-Like Brain of Mice Affected by Focal Cerebral Ischemia: Implications for Future Therapies.  
Michalski D, Hofmann S, Pitsch R, Grosche J, Härtig W  
Journal of Alzheimer's disease : JAD (2017) 59(2): 655-674. **IHC; tested species: mouse**
- Transient oxytocin signaling primes the development and function of excitatory hippocampal neurons.  
Ripamonti S, Ambrozkiwicz MC, Guzzi F, Gravati M, Biella G, Bormuth I, Hammer M, Tuffly LP, Sigler A, Kawabe H, Nishimori K, et al.  
eLife (2017) 6: . **WB; tested species: mouse**
- Damaged Neocortical Perineuronal Nets Due to Experimental Focal Cerebral Ischemia in Mice, Rats and Sheep.  
Härtig W, Mages B, Aleithe S, Nitzsche B, Altmann S, Barthel H, Krueger M, Michalski D  
Frontiers in integrative neuroscience (2017) 11: 15. **IHC; tested species: mouse, rat, sheep**
- Hallmarks of Alzheimer's Disease in Stem-Cell-Derived Human Neurons Transplanted into Mouse Brain.  
Espuny-Camacho I, Arranz AM, Fiers M, Snellinx A, Ando K, Munck S, Bonnefont J, Lambot L, Corthout N, Omodho L, Vanden Eynden E, et al.  
Neuron (2017) 93(5): 1066-1081.e8. **IHC; tested species: human, mouse**
- Delayed histochemical alterations within the neurovascular unit due to transient focal cerebral ischemia and experimental treatment with neurotrophic factors.  
Michalski D, Pitsch R, Pillai DR, Mages B, Aleithe S, Grosche J, Martens H, Schlachetzki F, Härtig W  
PloS one (2017) 12(4): e0174996. **IHC**
- Surgical extraction of human dorsal root ganglia from organ donors and preparation of primary sensory neuron cultures.  
Valtcheva MV, Copits BA, Davidson S, Sheahan TD, Pullen MY, McCall JG, Dikranian K, Gereau RW  
Nature protocols (2016) 11(10): 1877-88. **ICC**