

Antibody Sampler Kit for Glia Cells (cat. no. 803-ASK)

GFAP

Cat.No. 173 011; Monoclonal mouse antibody, 20 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	20 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 20 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) (see remarks) IP: yes ICC: 1 : 500 IHC: 1 : 200 IHC-P/FFPE: 1 : 500 ELISA: yes (see remarks)
Clone	134B1
Subtype	IgG2a (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 432 from human GFAP (UniProt Id: P14136)
Epitop	Epitop: AA 391 to 405 from human GFAP (UniProt Id: P14136)
Reactivity	Reacts with: human (P14136), rat (P47819), mouse (P03995), cow. No signal: zebrafish. Other species not tested yet.
Specificity	Specific for GFAP.
matching control	173-0P
Remarks	WB: The monoclonal antibodies are less sensitive compared to the polyclonals. ELISA: Suitable as capture antibody for sandwich-ELISA with cat. no. 173 002 or 173 211BT as detector antibody (protocol for sandwich-ELISA).

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

Glia 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.

MAP 2

Cat.No. 188 011; Monoclonal mouse antibody, 20 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	20 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 20 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 100 up to 1 : 500 IHC: 1 : 100 up to 1 : 200 IHC-P/FFPE: 1 : 500
Clone	198A5
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to AA 2 to 314 from human MAP2-4 hu (UniProt Id: P11137-4)
Epitop	Epitop: AA 82 to 96 from human MAP2-4 hu (UniProt Id: P11137-4)
Reactivity	Reacts with: human (P11137), rat (P15146), mouse (P20357). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for MAP 2; recognizes all four isoforms.
matching control	188-0P

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There are two major classes of heat stable **microtubule associated proteins** (MAPs): **MAP 2**, and tau. Both protein classes are involved in the regulation of microtubule polymerization in cells. Four differentially regulated isoforms of MAP 2 have been described so far.

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IBA 1

Cat.No. 234 004; Polyclonal Guinea pig antibody, 30 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	30 µl antiserum, lyophilized. For reconstitution add 30 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes ICC: 1 : 500 IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Immunogen	Synthetic peptide corresponding to AA 134 to 147 from rat IBA1 (UniProt Id: P55009)
Reactivity	Reacts with: human (P55008), rat (P55009), mouse (O70200), sheep. No signal: zebrafish. Other species not tested yet.
Specificity	Specific for IBA 1.
matching control	234-0P
Remarks	For unknown reasons the single domain anti-Guinea pig antibody cat. no. N0602 does not recognize this antibody.

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Ionized calcium-binding adaptor molecule 1 (**IBA 1**) or allograft inflammatory factor 1 (**AIF 1**) is an EF hand calcium binding protein which is expressed selectively in microglia/macrophages. Microglia are the smallest of the glial cell types in the central nervous system with cell bodies of only 2-5 µm in diameter.

IBA 1 expression has been suggested to be associated with the neuroinflammatory response and with transplant rejection.

S100B

Cat.No. 287 004; Polyclonal Guinea pig antibody, 30 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	30 µl antiserum, lyophilized. For reconstitution add 30 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: not recommended IP: not tested yet ICC: 1 : 500 IHC: 1 : 200 up to 1 : 500 IHC-P/FFPE: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 92 from rat S100B (UniProt Id: P04631)
Reactivity	Reacts with: rat (P04631), mouse (P50114). Other species not tested yet.
Specificity	Specific for S100B

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The family of S100 proteins comprises more than 20 members. These proteins are EF-hand Ca²⁺-binding proteins, and are widely distributed in mammalian tissue. Since these proteins are soluble in 100 % saturated ammonium-sulfate solution they have been named S100.

S100B is a frequently used marker protein for mature astrocytes whereas GFAP is also expressed in germinal zone cells that maintained their immature developmental stage.

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SOX 2

Cat.No. 347 003; Polyclonal rabbit antibody, 10 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	10 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 10 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 500 up to 1 : 1000 IHC: 1 : 200 IHC-P/FFPE: 1 : 200
Immunogen	Synthetic peptide corresponding to AA 303 to 319 from mouse SOX2 (UniProt Id: P48432)
Reactivity	Reacts with: rat, mouse (P48432). Other species not tested yet.
Specificity	Specific for SOX 2.

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Sex determining region of Y chromosome (**Sry**)-related high mobility group **box1-3**) or **SOX 1-3** proteins belong to the earliest transcription factors expressed in the developing CNS. **Sox1**, **Sox2** and **Sox3** constitute the B1-subgroup of the **Sox** gene family. They are expressed by most progenitor cells of the developing CNS and are generally downregulated by neural cells when they exit the cell cycle and differentiate.

CNP 1

Cat.No. 355 002; Polyclonal rabbit antibody, 40 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	40 µl antiserum, lyophilized. For reconstitution add 40 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes ICC: 1 : 500 IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 420 from mouse CNP1 (UniProt Id: P16330)
Reactivity	Reacts with: rat (P13233), mouse (P16330). Other species not tested yet.
Specificity	Specific for CNP 1. (K.O. verified)

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The 2', 3'-cyclic nucleotide 3'-phosphodiesterase **CNP 1**, also referred to as CNPase and CNP, is one of the most abundant membrane-associated enzymes in the myelin sheath of the vertebrate nervous system.

It is assumed that CNP 1 participates in RNA metabolism of myelinating oligodendrocytes.

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β-Actin

Cat.No. 251 011; Monoclonal mouse antibody, 20 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	20 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 20 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 up to 1 : 5000 (AP staining) IP: yes ICC: 1 : 500 IHC: not tested yet IHC-P/FFPE: not tested yet
Clone	130B4
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 2 to 16 from mouse β-Actin (UniProt Id: P60710)
Epitop	Epitop: AA 2 to 14 from mouse β-Actin (UniProt Id: P60710)
Reactivity	Reacts with: rat (P60711), mouse (P60710), zebrafish, human (P60709). Other species not tested yet.
Specificity	May cross-react to α- and γ-actin due to sequence homology.

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The two major cytoskeletal proteins involved in cell motility are myosin and **actin**. Monomeric actin is a globular protein that is expressed in all eukaryotic cells. Actin is the major subunit of microfilaments, a major component of the cytoskeleton, and of thin filaments, part of the contractile apparatus in muscle cells.

Actin is involved in many cellular processes including cell motility, maintenance of cell shape, and organelle trafficking.

Three main groups of actin have been identified. α-actins are found in muscle tissues whereas β- and γ-actins co-exist in most cell types as components of the cytoskeleton.