OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AM08203PU-N

GFAP Mouse Monoclonal Antibody [Clone ID: SB61a]

Product data:

Product Type:	Primary Antibodies
Clone Name:	SB61a
Applications:	ELISA
Recommended Dilution:	**ELISA** as a Capture antibody: 1 µg/mL
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Recombinant human Glial Fibrillary Acid Protein (GFAP).
Specificity:	This antibody reacts with human GFAP (~ 50 kDa).
Formulation:	100 mM Borate buffered saline, pH 8.2. No preservatives or amine-containing buffer salts added. State: Purified State: Liquid purified Ig fraction.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	glial fibrillary acidic protein
Database Link:	Entrez Gene 2670 Human P14136

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Background:

Glial Fibrillary Acid Protein (GFAP) was discovered by Bignami et al. (Ref.1) as a major fibrous protein of multiple sclerosis plaques. It was subsequently found to be a member of the 10 nm or intermediate filament protein family, specifically the intermediate filament protein family Class III, which also includes peripherin, desmin and vimentin. GFAP is heavily, and specifically, expressed in astrocytes and certain other astroglia in the central nervous system, in satellite cells in peripheral ganglia, and in non-myelinating Schwann cells in peripheral nerves. (Ref.2) Many types of brain tumors, presumably of astrocytic origin, heavily express GFAP. In addition, neural stem cells frequently strongly express GFAP. It is also found in the lens epithelium, Kupffer cells of the liver, in some cells of salivary tumors, and has been reported in erythrocytes. Therefore, antibodies to GFAP are very useful as markers of astrocytic cells and neural stem cells, and for distinguishing neoplasms of astrocytic origin from other neoplasms in the central nervous system.
Although its function is not fully understood, GFAP protein is probably involved in controlling the shape and movement of astrocytes. The protein may also play a significant role in the interactions of astrocytes with other cells, which are required for the formation and maintenance of the myelin layer that covers nerve cells.
Additionally, GFAP may assist in maintaining the protective blood-brain barrier.
In adults, GFAP levels increase as a result of the proliferation of astrocytes that occurs in response to a variety of physical, chemical and etiological insults, including Alzheimer's disease, epilepsy and multiple sclerosis.
Alexander's disease was recently shown to be caused by point mutations in the protein-coding region of the GFAP gene. (Ref.3) All forms of Alexander's disease are characterized by the presence of Rosenthal fibers, which are GFAP-containing cytoplasmic inclusions found in astrocytes.

Synonyms:

Glial Fibrillary Acidic Protein