

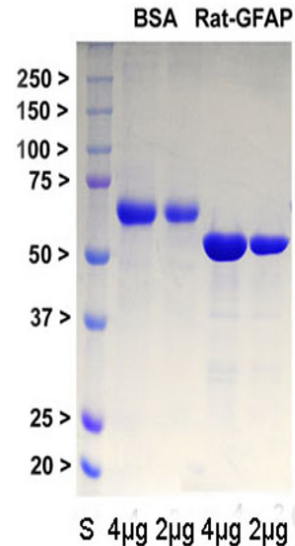
Ordering Information
 Web www.encorbio.com
 Email admin@encorbio.com
 Phone 352-372-7022
 Fax 352-372-7066

HGNC Name: GFAP
RRID: NA
Format: 1mg/mL in 6M Urea
Storage: Stable at 4°C for several months. For longer term store at -20°C or lower
UniProt: P47819

References:

1. Bignami A, Eng LF, Dahl D, Uyeda CT. Localization of the glial fibrillary acidic protein in astrocytes by immunofluorescence. *Brain Res.* 43:429-35 (1972).
2. Brenner M, et al. Mutations in GFAP, encoding glial fibrillary acidic protein, are associated with Alexander disease. *Nat Genet* 27:117-20 (2001).
3. Silver J, Miller JH. Regeneration beyond the glial scar. *Nat. Rev. Neurosci.* 5:146-56 (2004).
4. Schiff LL, Hadker N, Weiser S, Rausch C. A literature review of the feasibility of glial fibrillary acidic protein as a biomarker for stroke and traumatic brain injury. *Mol. Diagn. Ther.* 16:79-92 (2012).

Applications	Host	Molecular Wt.	HGNC	UniPort
Protein standard for ELISA, MSD, Luminex and Simoa assays, immunogen for antibody production	E coli	50kDa by SDS-PAGE plus about 5kDa tag sequence	GFAP	P47819



A codon optimized cDNA encoding isotype I of rat GFAP was generated and inserted into the pET29a(+) expression vector which adds a C-terminal His-tag to the rat sequence. The construct was expressed by standard methods in *E. coli* and purified using a Nickel column in 6M urea. The protein is supplied in this form as it would aggregate in more physiological buffers. The lane on the far left contains protein standards of the indicated molecular size in kDa. In the next lanes 4µg and 2µg of BSA were run and 4µg and 2µg of the recombinant rat GFAP were run in the two right lanes as indicated.

Background:

Glial Fibrillary Acidic Protein (GFAP) is a major protein of the nervous system and is localized in astrocytes, stem cells, Bergmann glia and non-myelinating Schwann cells. It may also be found in retinal Mueller cells in pathological states, and the levels of the protein generally increase in damage and disease states (1-3). GFAP assembles to form 10nm or intermediate filaments in the cytoplasm, and these filaments appear to have an important structural role in the cell. Recent work suggests that measurement of the levels of GFAP in blood and CSF gives information about CNS damage and disease states (4).

This product is identical to the rat GFAP isotype I sequence in GenBank entry [NP_058705.2](http://www.ncbi.nlm.nih.gov/nuccore/NP_058705.2). It can be used as a standard in ELISA and other antibody based assays on rodent animal damage and disease models. The human GFAP protein is a little different in amino acid sequence from the rat protein, so a recombinant form of the human protein is also available from EnCor, [Prot-r-GFAP](#), for use with studies of human damage and disease states.

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Abbreviation Key:

mAb—Monoclonal Antibody **pAb**—Polyclonal Antibody **WB**—Western Blot **IF**—Immunofluorescence **ICC**—Immunocytochemistry
IHC—Immunohistochemistry **E**—ELISA **Hu**—Human **Mo**—Monkey **Do**—Dog **Rt**—Rat **Ms**—Mouse **Co**—Cow **Pi**—Pig **Ho**—Horse **Ch**—Chicken
Dr—*D. rerio* **Dm**—*D. melanogaster* **Sm**—*S. mutans* **Ce**—*C. elegans* **Sc**—*S. cerevisiae* **Sa**—*S. aureus* **Ec**—*E. coli*.