

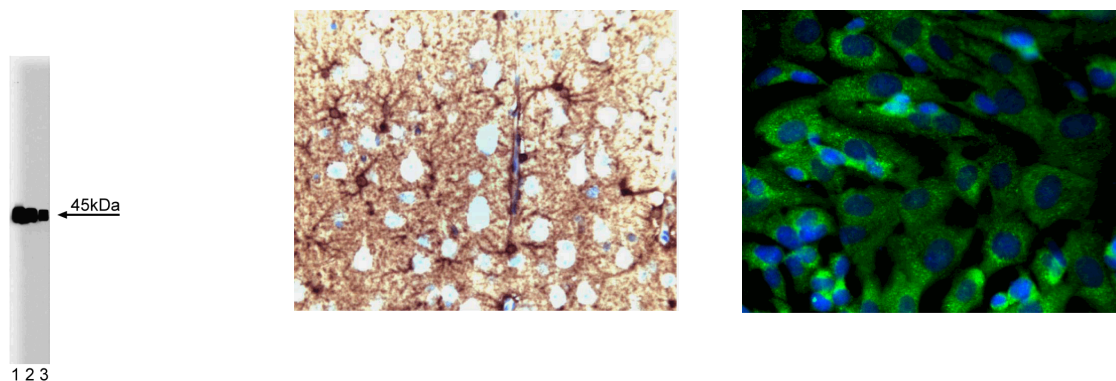
Technical Data Sheet

Purified Mouse Anti-Glutamine Synthetase**Product Information**

Material Number:	610517
Alternate Name:	Glutamate-Ammonia Ligase; GLUL; GLNS
Size:	50 µg
Concentration:	250 µg/ml
Clone:	6/Glutamine Synthetase
Immunogen:	Human Glutamine Synthetase aa. 1-373
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse
Target MW:	45 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Glutamine synthetase catalyzes the amination of glutamic acid to form glutamine. It is found in mammals as an octamer of identical 45 kDa subunits. Glutamine synthetase activity is a useful marker for astrocytes and an important differentiation feature in retina. It is also considered to be a key enzyme in the recycling of the neurotransmitter glutamate.



Western blot analysis of glutamine synthetase on a rat cerebrum lysate (left). Lane 1: 1:5000, lane 2: 1:10,000, lane 3: 1:20,000 dilution of the anti-glutamine synthetase antibody.

Glutamine synthetase staining on a rat cerebrum section (center). Section prepared during antibody development was formalin fixed and paraffin embedded without citrate buffer pretreatment. Note visible staining of astrocytes in the section. Magnification: 40X.

Immunofluorescent staining of SK-N-SH cells (right). Cells were seeded in a 384 well collagen coated Microplates (Material # 353962) at ~ 8,000 cells per well. After overnight incubation, cells were stained using the methanol fix/permeabilization protocol (see Recommended Assay Procedure; Bioimaging protocol link) and the anti-Glutamine Synthetase antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen) (pseudo colored green). Cell nuclei were counter stained with Hoechst 33342 (pseudo colored blue). The image was taken on a BD Pathway™ 855 or 435 Bioimager System using a 20x objective and merged using the BD AttoVision™ software. This antibody also stained SH-SY5Y, C6, U87 and U373 cells using both the Triton™ X-100 and methanol fix/permeabilization protocols (see Recommended Assay Procedure; Bioimaging protocol link).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunohistochemistry	Tested During Development
Bioimaging	Tested During Development
Immunoprecipitation	Not Recommended
Immunofluorescence	Not Recommended

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Recommended Assay Procedure:

For Western blot and IHC: Please refer to <http://www.bdbiosciences.com/resources/cellbiology/index.jsp>

For Bioimaging: Please refer to <http://www.bdbiosciences.com/resources/cellularimaging/index.jsp>

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
353219	BD Falcon™ 96-well Imaging Plate		(none)
554655	Fixation Buffer	100 ml	(none)
558050	Perm Buffer III	125 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Triton is a trademark of the Dow Chemical Company.

References

Fei ZL, D'Ambrosio C, Li S, Surmacz E, Baserga R. Association of insulin receptor substrate 1 with simian virus 40 large T antigen. *Mol Cell Biol.* 1995; 15(8):4232-4239. (Biology: Immunoprecipitation)

Kentrotti S, Baker R, Lee K, Bruce C, Vernadakis A. Platelet-activating factor increases glutamine synthetase activity in early and late passage C-6 glioma cells. *J Neurosci Res.* 1991; 28(4):497-506. (Biology)

Kronfeld I, Kazimirsky G, Lorenzo PS, Garfield SH, Blumberg PM, Brodie C. Phosphorylation of protein kinase Cdelta on distinct tyrosine residues regulates specific cellular functions. *J Biol Chem.* 2000; 275(45):35491-35498. (Biology: Western blot)

Labow BI, Souba WW, Abcouwer SF. Glutamine synthetase expression in muscle is regulated by transcriptional and posttranscriptional mechanisms. *Am J Physiol.* 1999; 276(6):E1136-E1145. (Biology: Western blot)

Vardimon L, Fox LE, Cohen-Kupiec R, Degenstein L, Moscona AA. Expression of v-src in embryonic neural retina alters cell adhesion, inhibits histogenesis, and prevents induction of glutamine synthetase. *Mol Cell Biol.* 1991; 11(10):5275-5284. (Biology)

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