

Alexa Fluor® 647 anti-Glutamine synthetase Antibody

Catalog# / Size	856203 / 25 µg 856204 / 100 µg
Clone	O91F4
Regulatory Status	RUO
Other Names	GLUL, Glutamine Synthetase
Isotype	Mouse IgG2a, κ
Description	Glutamine Synthase (GLUL) is primarily expressed in astrocytes in the brain. The main function of GLUL is to catalyze the condensation of glutamate and ammonia to form glutamine. GLUL plays an important role in the metabolic regulation of glutamate, detoxification of brain ammonia, as well as recycling of neurotransmitters. GLUL expression in endothelial cells may be involved in cell migration during pathological angiogenesis. Upregulation of astrocytic GLUL to uptake excess ammonia and glutamate may play a neuroprotective role during neuroinflammation.

Product Details

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant human GLUL protein expressed in HEK293T cell
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	IHC-P - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 1.0 - 10.0 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.

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Excitation Laser	Red Laser (633 nm)
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Additional Product Notes	For use in immunohistochemistry on formalin-fixed paraffin-embedded tissue (IHC-P), it is recommended to perform antigen retrieval using either Citrate Buffer, 10X (Cat. No. 420902) or Tris-EDTA pH 9.0 Antigen Retrieval Buffer (10X) (Cat. No. 422704).
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Application References	1. Shajahan-Haq AN, <i>et al.</i> 2014. <i>Mol Cancer</i> . 13:239. (WB)
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(PubMed link indicates
BioLegend citation)

RRID

AB_3717207 (BioLegend Cat. No. 856203)
AB_3717207 (BioLegend Cat. No. 856204)

Antigen Details

Structure	GLUL is a 373 amino acid protein with an apparent molecular mass of ~ 42 kD.
Distribution	Tissue Distribution: Predominantly expressed in brain, kidney, and liver. Cellular Distribution: Extracellular, cytosol, nucleus, and mitochondrion.
Interaction	Forms homooctamer and homotetramer.
Cell Type	Astrocytes
Biology Area	Cell Biology, Mitochondrial Function, Neuroinflammation, Neuroscience, Neuroscience Cell Markers, Synaptic Biology
Molecular Family	Postsynaptic proteins, Presynaptic proteins
Antigen References	1. Eelen G, et al. 2018. Nature. (7721):63-69 2. Spodenkiewicz M, et al. 2016. Biology (Basel). 5(4) 3. Fan S, et al. 2018. J Cell Biochem. 119(7):6008

Gene ID

[2752](#)
[14645](#)
[24957](#)

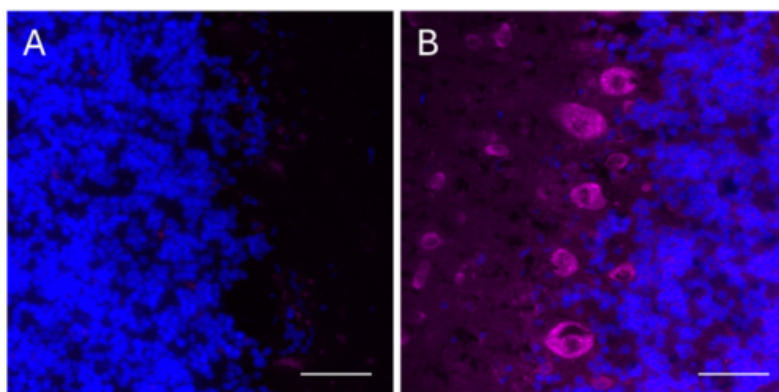
Related Protocols

- [Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

Other Formats

Alexa Fluor® 647 anti-Glutamine synthetase, Purified anti-Glutamine synthetase

Product Data



IHC staining with Alexa Fluor® 647 anti-Glutamine synthetase (clone O91F4) on formalin-fixed paraffin-embedded human brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R., 1X (Cat. No. 928502), the tissue was incubated without (panel A) or with (panel B) Alexa Fluor® 647 anti-Glutamine synthetase (clone O91F4). Nuclei were counterstained with DAPI (Cat. No. 422801). Images were captured on Keyence with a 40X objective and merged. Scale bar: 50 µm

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