



## Rabbit Anti-Glutamine synthetase antibody

SL4143R

<b>Product Name:</b>	Glutamine synthetase
<b>Chinese Name:</b>	谷氨酰胺合成酶/谷氨酸氨连接酶抗体
<b>Alias:</b>	cell proliferation-inducing protein 59; GLNA; GLNA_HUMAN; GLNS; GLUL; Glutamate ammonia ligase; Glutamate decarboxylase; Glutamate--ammonia ligase; glutamine synthase; Glutamine synthetase; GS; PIG 43; PIG 59; PIG43; PIG59; Proliferation inducing protein 43.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	42kDa
<b>Cellular localization:</b>	cytoplasmicMitochondrion
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human Glutamine synthetase:285-373/373
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	Glutamine Synthetase catalyzes the conversion of ammonia and glutamate to glutamine. It is found in astrocytes as an octamer of identical 42 kDa subunits. The function of Glutamine Synthetase is the detoxification of brain ammonia. It also has an important

role in the metabolic regulation of neurotransmitter glutamate. Because of the multiple functions and importance of Glutamine Synthetase in cellular metabolism, both catalytic activities and synthesis are highly regulated. The activity of Glutamine Synthetase is controlled by adenylylation. Its activity is decreased in the cerebral cortex of brains affected by Alzheimer's disease, particularly in the vicinity of senile plaques. It is also decreased under conditions of glucose deprivation. The level of expression of Glutamine Synthetase is increased during ischemia in vivo or hypoxia in culture.

**Function:**

This enzyme has 2 functions: it catalyzes the production of glutamine and 4-aminobutanoate (gamma-aminobutyric acid, GABA), the latter in a pyridoxal phosphate-independent manner (By similarity). Essential for proliferation of fetal skin fibroblasts.

**Subcellular Location:**

Cytoplasm. Mitochondrion.

**DISEASE:**

Defects in GLUL are the cause of congenital systemic glutamine deficiency (CSGD) [MIM:610015]. CSGD is a rare developmental disorder with severe brain malformation resulting in multi-organ failure and neonatal death. Glutamine is largely absent from affected patients serum, urine and cerebrospinal fluid.

**Similarity:**

Belongs to the glutamine synthetase family.

**SWISS:**

P15104

**Gene ID:**

2752

**Database links:**

[Entrez Gene: 2752](#) Human

[Entrez Gene: 281199](#) Cow

[Entrez Gene: 403443](#) Dog

[Entrez Gene: 14645](#) Mouse

[Entrez Gene: 24957](#) Rat

[Oimim: 138290](#) Human

[SwissProt: P15103](#) Cow

[SwissProt: Q8HZM5](#) Dog

[SwissProt: P15104](#) Human

[SwissProt: P15105](#) Mouse

[SwissProt: P09606](#) Rat

[Unigene: 518525](#) Human

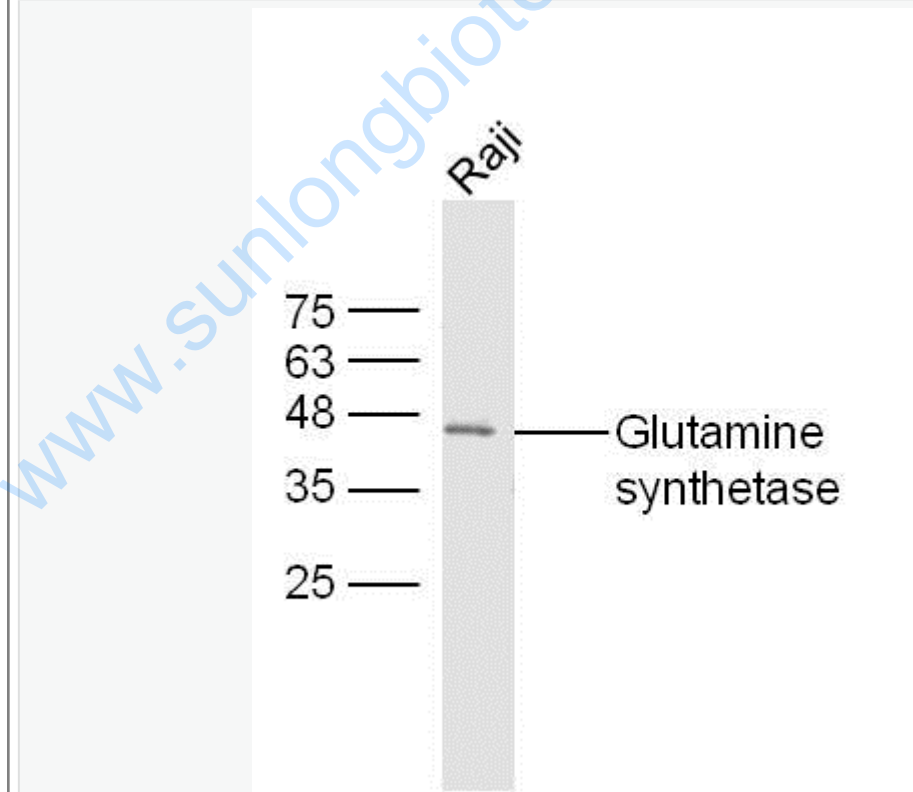
[Unigene: 210745](#) Mouse

[Unigene: 2204](#) Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



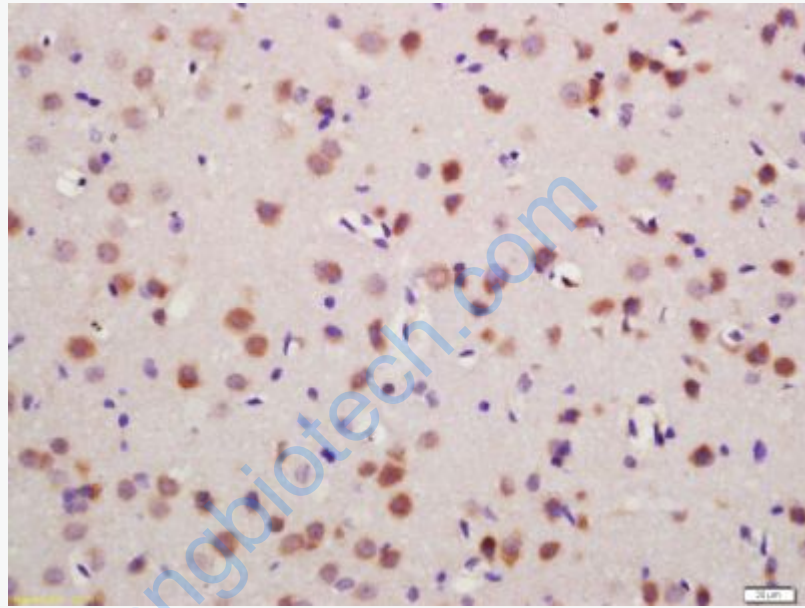
Sample: Raji Cell (Human) Lysate at 40 ug

Primary: Anti- Glutamine synthetase (SL4143R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 42 kD

Observed band size: 42 kD

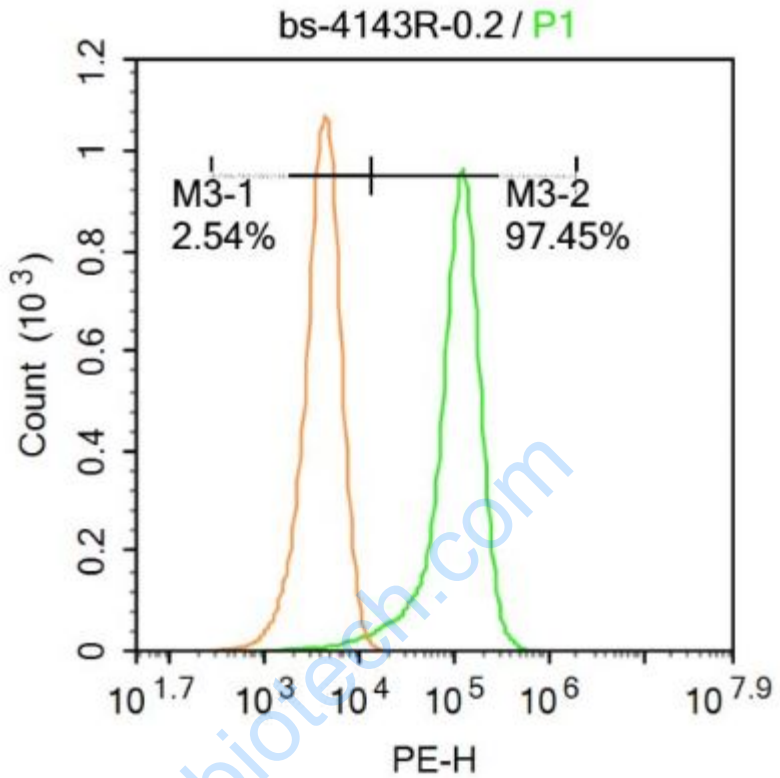


Tissue/cell: mouse brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Glutamine synthetase Polyclonal Antibody,

Unconjugated(SL4143R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: Molt-4.

Primary Antibody (green line): Rabbit Anti-Glutamine synthetase antibody (SL4143R).

Dilution:  $1\mu\text{g} / 10^6$  cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution:  $1\mu\text{g} / \text{test}$ .

Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 20% PBST for 20 min at  $-20^\circ\text{C}$ . The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room

temperature .Cells stained with Primary Antibody for 30 min at room temperature.  
The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

[www.sunlongbiotech.com](http://www.sunlongbiotech.com)