

# L-Glutamate Antibody – Rabbit Polyclonal

Ref: IS1001

The anti-L-Glutamate antibody IS1001 is a rabbit polyclonal antibody optimized to ensure superior affinity and specificity. Combined with the [STAINperfect immunostaining kit A](#), the antibody allows direct L-Glutamic acid visualization in cell cultures, whole mounts and tissue sections.

<b>Clonality</b>	Polyclonal antibody
<b>Host</b>	Rabbit
<b>Reactivity</b>	Reacts with all species
<b>Tested samples</b>	Whole mounts, cell culture, tissue sections
<b>Staining procedure</b>	<a href="#">STAINperfect immunostaining kit A</a>
<b>Format</b>	50µL (approx. 40 tissue sections)
<b>References</b>	<a href="#">Cited in 2 papers</a>

# INFORMATIONS

## Product overview

<b>Product name</b>	L-Glutamate antibody – Rabbit polyclonal Ab
<b>Synonyms</b>	Anti-L-Glutamic acid antibody
<b>Immunogen</b>	Conjugated L-Glutamate
<b>Specificity</b>	When tested in competitive ELISA, the anti-conjugated L-Glutamate antibody did not show any significant cross reactivity with L-Glutamic acid analogs, including D-Glutamate, L-Glutamine and L-Aspartate conjugates
<b>Volume</b>	50µL

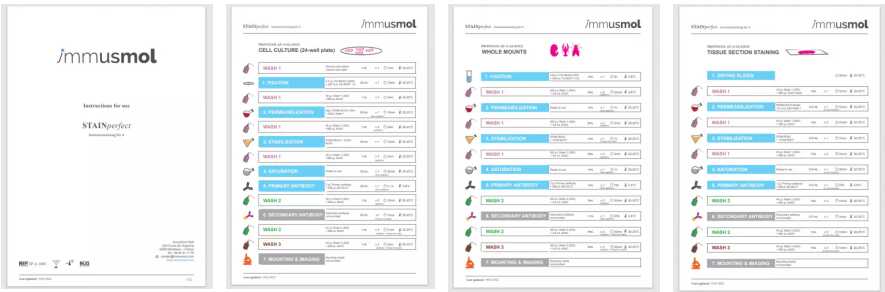
## Storage

<b>Form</b>	Liquid
<b>Purity</b>	Purified anti-serum
<b>Storage</b>	Store at +4°C for short term (1-2 months). Aliquot and store at -20°C for long term. Avoid repeated freeze / thaw cycles
<b>Material safety datasheet</b>	<a href="#">Download MSDS</a>

PROTOCOLS

IF - Cell cultures, Whole mounts, Tissue sections	Dilute antibody with the antibody diluent provided in the <a href="#">STAINperfect immunostaining kit A</a> . Use at 1/250 -1/1000 dilution. Follow the STAINperfect protocol suited to your sample
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only
Full protocol	<a href="#">Download STAINperfect protocol for L-Glutamate staining</a>

Protocols-at-a-glance

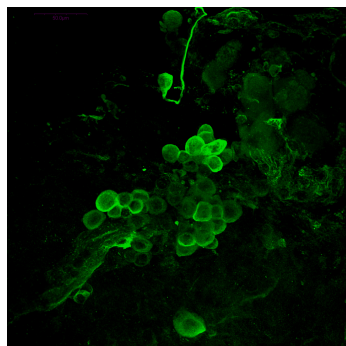


- [Complete Instructions for Use](#)
- [Protocol-at-a-glance for cell cultures](#)
- [Protocol-at-a-glance for whole mounts](#)
- [Protocol-at-a-glance for tissue sections](#)

REFERENCES

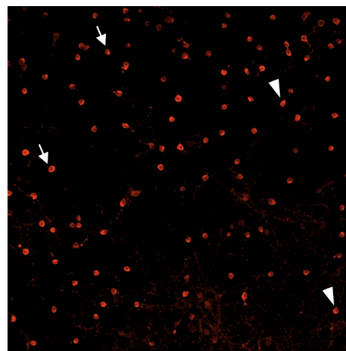
Product citation

Product pictures

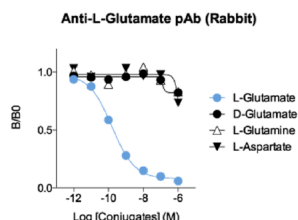


### Immunostaining of glutamatergic cells in the crayfish brain.

Anti-L-Glutamate antibody highlights the presence of glutamatergic cells into the brain of a crayfish. Staining was obtained with anti-L-Glutamate antibody and performed with STAINperfect immunostaining kit A, following the protocol for whole mounts samples. Alexa Fluor® 488 conjugated secondary antibody was used and images obtained by confocal imaging at high magnification.

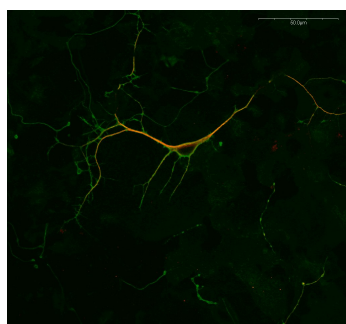


### Glutamatergic cell population



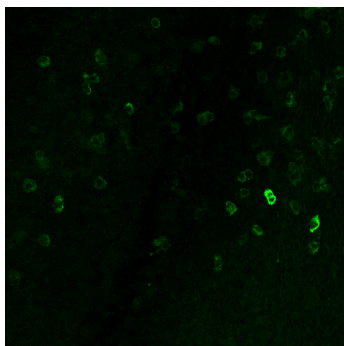
### Affinity & specificity of anti-L-Glutamate antibody

Competitive ELISA demonstrates that low amounts of L-Glutamate conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of D-Glutamate, L-Glutamine and L-Aspartate conjugates do not affect reaction (high specificity).

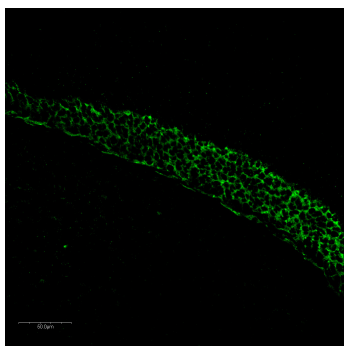


### L-Glutamate (green) and MAP2 (red) immunostaining of mouse cortical primary neurons culture

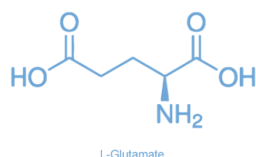
Immunodetection of L-Glutamate (green) and MAP2- (red) positive neurons in mouse primary cortical culture. Staining was performed using STAINperfect immunostaining kit A, according to the protocol optimized for cell culture. After addition of a fluorescent labeled secondary antibody this staining reveals the presence of L-Glutamate within fibers and soma of neurons.

**Low magnification of embryonic (E15.5) medulla immunostaining of glutamatergic cells.**

Glutamatergic cells into the hindbrain of mouse embryo (E15.5) were labeled with antibodies to L-Glutamate using STAINperfect immunostaining kit A and the protocol for whole mounts. Goat anti-rabbit Alexa Fluor® 488 secondary antibody was used and picture was acquired by confocal imaging.

**Glutamatergic cells in brain stem of mouse embryo ( E13.5).**

Immunostaining of L-Glutamate cells in the brain stem of E13.5 mouse embryo following whole mount protocol provided with STAINperfect immunostaining kit A. Our optimized L-Glutamate rabbit antibody allowed L-Glutamate detection with a cytoplasmic pattern. Secondary antibody (Alexa Fluor® 488 conjugated) was used and staining visualized by confocal imaging.

**L-Glutamic acid (L-Glutamate)**

Amino acid L-Glutamic acid (L-Glutamate) is the major excitatory neurotransmitter in the vertebrate nervous system. Agonist of NMDA, AMPA, Kainate and metabotropic receptors, L-Glutamic acid regulates synaptic plasticity, and is thus involved in learning and mnemonic processes. However, by activating NMDA receptors, L-Glutamic acid may also lead to neuronal damage and death. Glutamate toxicity is thus associated with the pathogenesis of neurodevelopmental and neurodegenerative disorders.

## Contact information

Immusmol  
229 Cours de l'Argonne  
33 000 Bordeaux - France  
Tel: +33 (0) 5 6431 1170  
[www.immusmol.com](http://www.immusmol.com)

**To order, review, ask for technical support, visit product page at:**

<https://www.immusmol.com/shop/l-glutamate-rabbit-pab/>