

# 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

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### Product overview

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|---------------------|--|
| <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

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|                                  |  |
|----------------------------------|--|
| <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

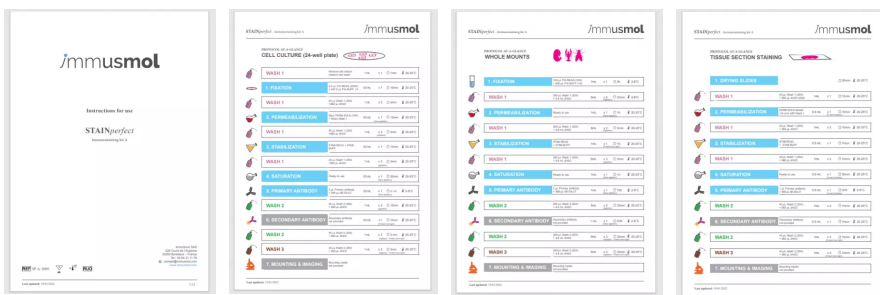
**IF - Cell cultures, Whole mounts, Tissue sections** Dilute antibody with the antibody diluent provided in the [STAINperfect immunostaining kit A](#). Use at 1/250 -1/1000 dilution. Follow the STAINperfect protocol suited to your sample

**Comments** Optimal working dilutions must be determined by the end-user

**Restrictions** For research use only

**Full protocol** [Download STAINperfect protocol for L-Glutamate staining](#)

## Protocols-at-a-glance



[Complete Instructions for Use](#)

[Protocol-at-a-glance for cell cultures](#)

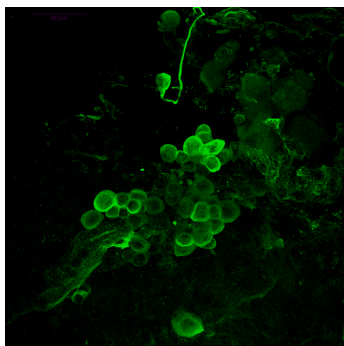
[Protocol-at-a-glance for whole mounts](#)

[Protocol-at-a-glance for tissue sections](#)

# REFERENCES

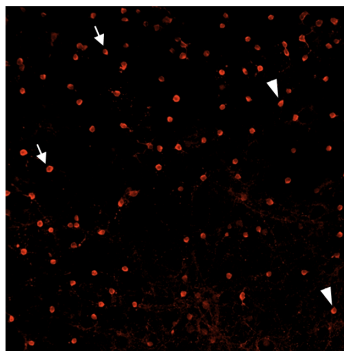
## Product citation

## Product pictures

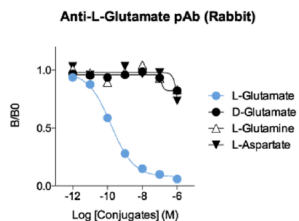


### Immunostaining of glutamatergic cells in the crayfish brain.

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.

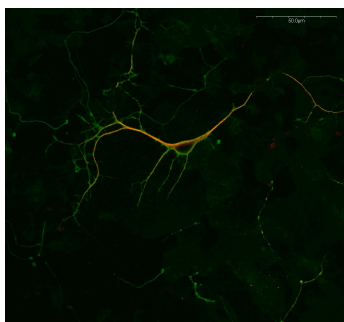


### Glutamatergic cell population



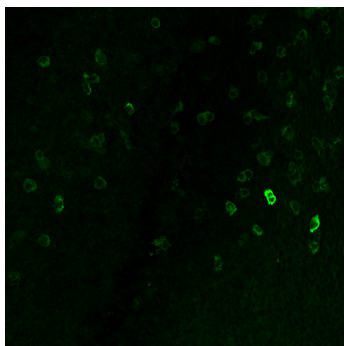
### Affinity & specificity of anti-L-Glutamate antibody

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).



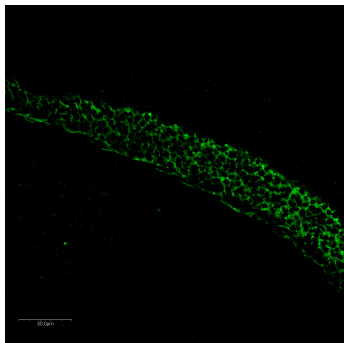
### L-Glutamate (green) and MAP2 (red) immunostaining of mouse cortical primary neurons culture

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.

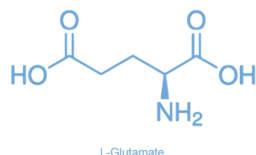
Glutamatergic cells into the hindbrain of mouse embryo (E15.5) were labeled with antibodies to L-Glutamate using STAINperfect immunostaining kit A and the protocol for whole mounts. Goat anti-rabbit Alexa Fluor® 488 secondary antibody was used and picture was acquired by confocal imaging.



### 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

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

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