

# L-Glutamate mouse mAb – IS018

Ref: IS018-sp

Anti-L-Glutamate antibody 1D5-1B1 is a mouse monoclonal Ab specifically selected by competitive ELISA for its affinity and specificity features. Using with the [STAINperfect immunostaining kit A](#), our antibody directly labels L-Glutamate in whole mounts, cell culture and tissue sections.

<b>Clonality</b>	Monoclonal antibody
<b>Host</b>	Mouse
<b>Applications</b>	<a href="#">IHC</a> / <a href="#">IF</a>
<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

## INFORMATIONS

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### Product overview

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<b>Product name</b>	L-Glutamate antibody – mouse mAb
<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 Glutamate antibody did not show any significant cross reactivity with its analogs, including D-Glutamate
<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

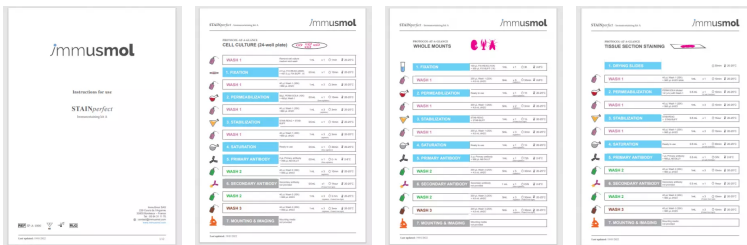
**IF - Cell cultures, Whole mounts, Tissue sections** Dilute antibody with the antibody diluent provided in the [STAINperfect immunostaining kit A](#). Use at 1/250 -1/1000 dilution. Follow the STAINperfect protocol suited to your sample

**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](#)

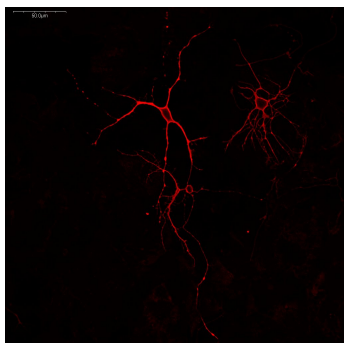
## REFERENCES

Antibody not yet cited. Submit an article and [get a 10% discount](#).

### Selected articles about L-Glutamate:

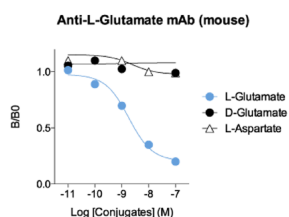
- [Okubo Y et al. Imaging extrasynaptic glutamate dynamics in the brain. Proc Natl Acad Sci U S A. 2010 Apr 6;107\(14\):6526-31.](#)
- [Meldrum BS. Glutamate as a neurotransmitter in the brain: review of physiology and pathology. J Nutr. 2000 Apr;130\(4S Suppl\):1007S-15S.](#)
- [Hynd MR, Scott HL, Dodd PR. Glutamate-mediated excitotoxicity and neurodegeneration in Alzheimer's disease. Neurochem Int. 2004 Oct;45\(5\):583-95.](#)

## Product pictures



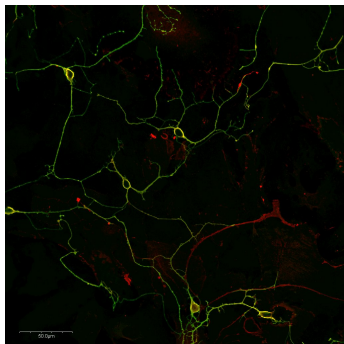
### Staining of glutamatergic neurons in mouse primary cortical culture

Our optimized mouse monoclonal anti-L-Glutamate antibody allows the detection of L-Glutamate within primary neurons in cell culture. Staining was performed using STAINperfect immunostaining kit A, according to the protocol optimized for cell culture. After addition of a fluorescent labeled



### Affinity & specificity of anti-L-Glutamate monoclonal antibody 1D5-1B1

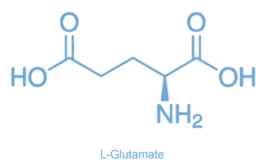
Competitive ELISA demonstrates that low amounts of L-Glu conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of D-Glutamate and L-Aspartate conjugates do not affect reaction (high specificity).



### L-Glutamate and GABA in adult mouse primary cortical neurons

Adult mouse primary cortical neurons were stained with mouse monoclonal anti-L-glutamate antibody (red) combined with anti-GABA rabbit polyclonal antibody (green). Staining was performed using optimized sample preparation with STAINperfect immunostaining kit A and according to the protocol for cell culture. Fluorescent labeled secondary antibody were used and pictures were acquired 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-monoclonal-antibody-bundle/>