

# Tryptophan mouse mAb - IS011

Ref: IS011-sp

The anti-Tryptophan antibody IS011 is a mouse monoclonal antibody optimized to ensure high affinity and specificity. Combined with the [STAINperfect immunostaining kit A](#), this antibody allows direct L-Tryptophan visualization in whole mount, cell culture and tissue sections.

<b>Clonality</b>	Monoclonal antibody (clone 4H11-A11)
<b>Host</b>	Mouse
<b>Reactivity</b>	Reacts with all species
<b>Tested samples</b>	Whole mount, cell culture, tissue sections
<b>Staining procedure</b>	<a href="#">STAINperfect immunostaining kit A</a>
<b>Format</b>	50µL (approx. 40 tissue sections)

# INFORMATIONS

## Product overview

<b>Product name</b>	L-Tryptophan antibody
<b>Synonyms</b>	Anti-L-Trp antibody (S)-2-Amino-3-(3-indolyl)propionic acid antibody L-alpha-Amino-3-indolepropionic acid antibody (S)-2-Amino-3-(3-indolyl)propanoic acid antibody L-alpha-Amino-3-indolepropanoic acid antibody
<b>Immunogen</b>	Conjugated L-Tryptophan
<b>Isotype</b>	IgG1 k chain
<b>Specificity</b>	When tested in competitive ELISA, the anti-conjugated L-Tryptophan antibody did not show any significant cross reactivity with Tryptophan analogs, including Tryptamine
<b>Volume</b>	50µL

## Storage

<b>Form</b>	Liquid
<b>Purity</b>	Purified IgG
<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

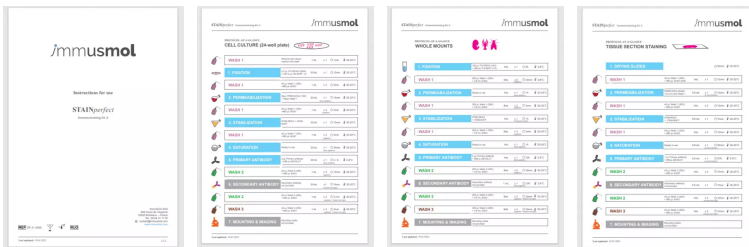
**IF - Cell cultures, Whole mounts, Tissue sections** Dilute antibody with the antibody diluent provided in the [STAINperfect immunostaining kit A](#). Use at 1/250 -1/1000 dilution. Follow the STAINperfect protocol suited to your sample

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

**Restrictions** For research use only

**Full protocol** [Download STAINperfect protocol for dopamine 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

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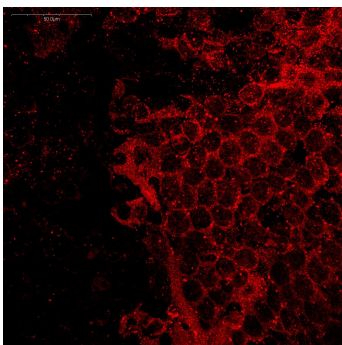
Antibody not yet cited. Submit an article and get a 10% discount.

### **Selected articles on L-Tryptophan:**

- [Berthon C, Fontenay M, Corm S, Briche I, Allorge D, Hennart B, Lhermitte M, Quesnel B. Metabolites of tryptophan catabolism are elevated in sera of patients with myelodysplastic syndromes and inhibit hematopoietic progenitor amplification. Leuk Res. 2013 May;37\(5\):573-9. doi: 10.1016/j.leukres.2013.02.001. Epub 2013 Feb 28.](#)
- [Schwarcz R, Bruno JP, Muchowski PJ, Wu HQ. Kynurenines in the mammalian brain: when physiology meets pathology. Nat Rev Neurosci. 2012 Jul;13\(7\):465-77. doi: 10.1038/nrn3257.](#)
- [Pilotte L, Larrieu P, Stroobant V, Colau D, Dolusic E, Frédérick R, De Plaen E, Uyttenhove C, Wouters J, Masereel B, Van den Eynde BJ. Reversal of tumoral immune resistance by inhibition of tryptophan 2,3-dioxygenase. Proc Natl Acad Sci U S A. 2012 Feb 14;109\(7\):2497-502. doi: 10.1073/pnas.1113873109. Epub 2012 Jan 30.](#)
- [Hoshi M, Matsumoto K, Ito H, Ohtaki H, Arioka Y, Osawa Y, Yamamoto Y, Matsunami H, Hara A, Seishima M, Saito K. L-tryptophan-kynurenine pathway metabolites regulate type I IFNs of acute viral myocarditis in mice. J Immunol. 2012 Apr 15;188\(8\):3980-7. doi: 10.4049/jimmunol.1100997. Epub 2012 Mar 14.](#)

## Product pictures

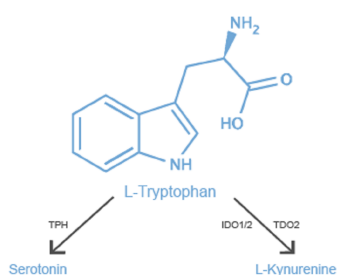
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### **Tryptophan detection in the crayfish brain**

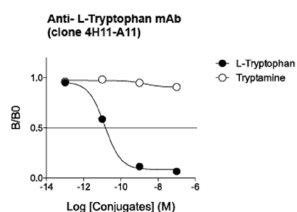
Anti-Tryptophan antibody demonstrates the presence of Tryptophan positive cells in the brain of a crayfish. Staining was obtained with mouse monoclonal anti-Tryptophan antibody (IS011) and performed with STAINperfect immunostaining kit A, following the protocol for whole mount samples. Fluorescent conjugated secondary antibody was used and images obtained by confocal imaging at high magnification (x40).

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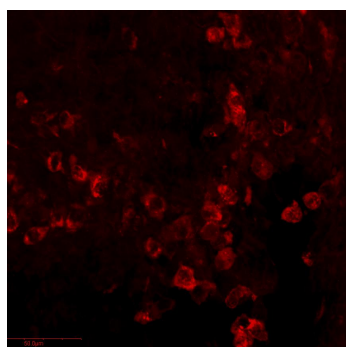
## Amino acid L-Tryptophan

L-Tryptophan is an essential amino acid, which is converted into Serotonin by tryptophan hydroxylase (TPH) in the gut or brain, or catabolized by various cell types into L-Kynurenine through indoleamine 2,3-dioxygenase (IDO1/2) or tryptophan 2,3-dioxygenase (TDO2). Abnormal tryptophan metabolism is implicated in a wide range of pathological states, including metabolic and auto-immune diseases, cancer, viral infections, as well as neurodegenerative and mood disorders.



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

Competitive ELISA demonstrates that low amounts of L-Tryptophan conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of L-Tryptophan analog tryptamine do not affect reaction (high specificity).



## Tryptophan immunostaining in the CNS of embryonic mouse

Using STAINperfect immunostaining kit A, Tryptophan was detected in the hindbrain of embryonic mouse E15.5. Staining was obtained following the protocol optimized for whole mount using IS011 mouse monoclonal antibody targeting L-Tryptophan. Fluorescent conjugated secondary antibodies were then used and images captured by confocal microscopy at high magnification.

## Contact information

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

<https://www.immusmol.com/shop/l-tryptophan-monoclonal-antibody-bundle/>