L-Tryptophan monoclonal antibody

Ref: IS011

Validated for IHC in human brain tissues, our monoclonal anti-L-tryptophan antibody proved to work at low concentration in paraffin-embedded tissues. Highly affine and specific, as shown by competitive ELISA, 4H11-A11 could also cater for tryptophan detection by IF.

Clonality	Monoclonal antibody (clone 4H11-A11)
Host	Mouse
Valided applications	IHC
Specie reactivity	Reacts with all species
References	Not yet cited to our knowledge. Submit content and get a 10% discount!
Format	50µl

Product information

Product overview

Product name	L-Tryptophan antibody
Synonyms	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
Immunogen	Conjugated L-Tryptophan
Isotype	IgG1 k chain
Clone	clone 4H11-A11
Specificity	When tested in competitive ELISA, the anti-conjugated L-Tryptophan antibody did not show any significant cross reactivity with Tryptophan analogs, including Tryptamine
Lot number	140201

Reconstitution & storage

Form	Lyophilized powder
Purity	Purified IgG
Concentration	0,5 mg/ml
Storage	Store at 4°C
Storage buffer	Before use, vial should be resuspended in 50 µL of ultrapure water. Store at +4°C for short term (1-2 weeks). Aliquot and store at -20°C for long term. Avoid repeated freeze / thaw cycles.

Protocols

Immunohistochemistry (IHC)	Dilute at 1:200-1:2000. Perform heat antigen retrieval (pH=6) before initiating IHC staining protocol on paraffin-embedded and frozen sections
Immunofluorescence (IF)	Dilute at 1:100-1:1000 on paraffin-embedded and frozen sections. Perform heat antigen retrieval and incubate with fluorescent secondary antibody conjugate.
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only

References

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

Selected articles on L-Tryptophan:

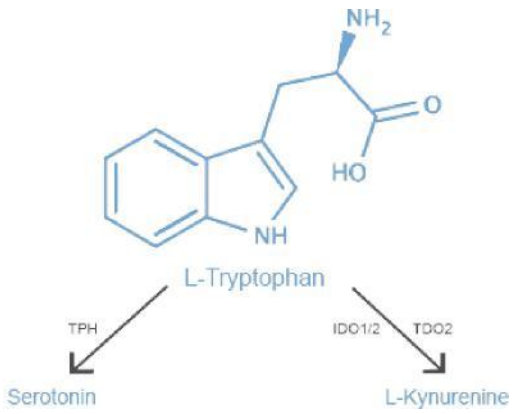
- Berthon C, Fontenay M, Corm S, Briche I, Allorge D, Hennart B, Lhermitte M, Quesnel B. Metabolites of tryptophan catabolism are elevated in sera of patients with myelodysplastic syndromes and inhibit hematopoietic progenitor amplification. Leuk Res. 2013 May;37(5):573-9. doi: 10.1016/j.leukres.2013.02.001. 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.

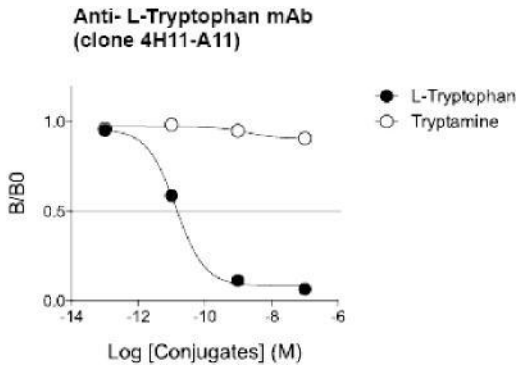
- Hoshi M, Matsumoto K, Ito H, Ohtaki H, Arioka Y, Osawa Y, Yamamoto Y, Matsunami H, Hara A, Seishima M, Saito K. L-tryptophan-kynurenine pathway metabolites regulate type I IFNs of acute viral myocarditis in mice. J Immunol. 2012 Apr 15;188(8):3980-7. doi: 10.4049/jimmunol.1100997. Epub 2012 Mar 14.

Product pictures



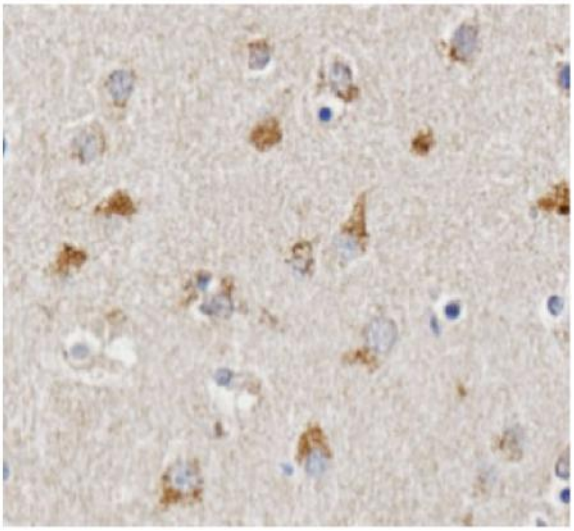
Amino acid L-Tryptophan

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).



L-Tryptophan detection in human caudate-putamen by immunohistochemistry (IHC)

Immunohistochemical analysis of paraffin-embedded human caudate-putamen tissue reveals cytoplasmic accumulation of L-Tryptophan in glial cells. Formalin-fixed tissues were subjected to pH=6 antigen retrieval followed by overnight incubation with primary anti-L-Tryptophan antibody (1/500 dilution). After incubation with polymer-conjugated secondary antibody, DAB was used to visualize the staining.

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