L-Kynurenine antibody

Ref: IS003

Monoclonal anti-L-Kynurenine antibody 3D4-F2 enabled to illustrate, for the first time, the presence of L-kynurenine in human brain and tumor samples by IHC and IF. Recently, our anti-kynurenine antibody was used to stratify cancer patients for kynurenine pathway activity (open-access PLOS ONE article).

Clonality	Monoclonal antibody (clone 3D4-F2)
Host	Mouse (see anti-KYN rabbit pAb)
Valided applications	IHC / IF
Specie reactivity	Reacts with all species
References	1 citation
Format	50 µL

Product information

Product overview

Product name	L-Kynurenine antibody
Synonyms	(S)-Kynurenine antibody L-2-Amino-4-(2-aminophenyl)-4-oxobutanoic acid antibody Kynurenin antibody ?-Anthraniloyl-L-alanine antibody,
Immunogen	Conjugated L-Kynurenine
Isotype	IgG1 k chain
Clone	clone 3D4-F2
Specificity	When tested in competitive ELISA, the anti-L-Kynurenine antibody did not show any significant cross reactivity with L-Tryptophan, 3-hydroxy-DL-Kynurenine, Kynurenic acid, Anthranilic acid or 3-hydroxyAnthranilic acid conjugates
Lot number	140201

Storage

Form	Liquid
Purity	Purified IgG
Concentration	0,5 mg/ml
Storage	Store at +4°C for short term (1-2 months). Aliquot and store at -20°C for long term. Avoid repeated freeze / thaw cycles.
Material safety datasheet	Download MSDS

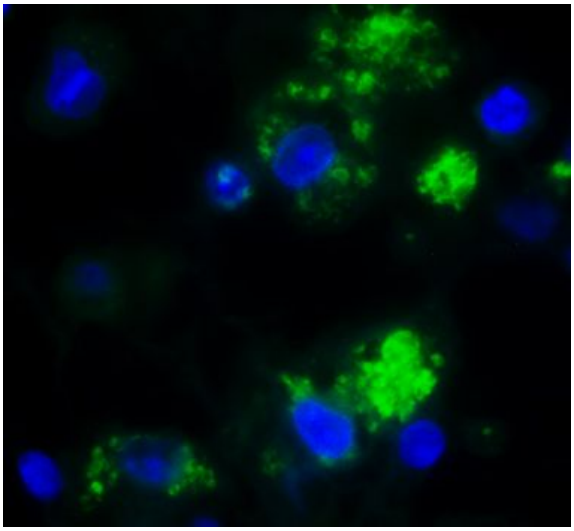
Protocols

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. Before staining, perform heat antigen retrieval
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only

References

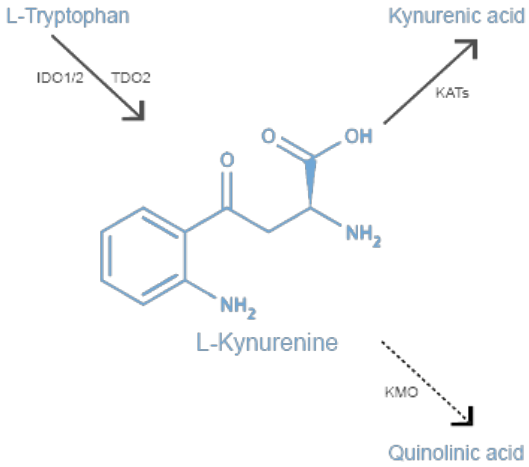
- **Product citation:** Forteza et al. Activation of the Regulatory T-Cell/Indoleamine 2,3-Dioxygenase Axis Reduces Vascular Inflammation and Atherosclerosis in Hyperlipidemic Mice. Front Immunol. 2018 May 7
- **Product citation:**Maliniemi et al. Biological and clinical significance of tryptophan-catabolizing enzymes in cutaneous T-cell lymphomas. Oncoimmunology. 2017 Feb 10.
- **Product citation:** Puccetti et al. Accumulation of an endogenous tryptophan-derived metabolite in colorectal and breast cancers. PLoS One. 2015 Apr 16;10(4)

Product pictures



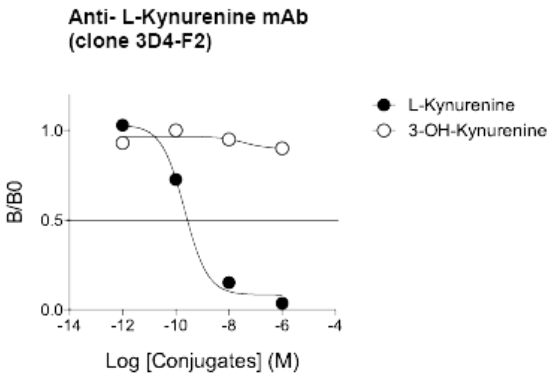
L-Kynurenine visualization in human intestinal immune cells by IF

Immunofluorescence staining reveals L-Kynurenine accumulation in specific immune cells in human colon tissue. Paraffin-embedded tissue section was subjected to pH=6 antigen retrieval followed by overnight incubation with primary antibody (dilution 1/250). After incubation with Alexa-488 conjugated secondary Ab, epifluorescence microscopy (100X) was used to visualize IF staining.



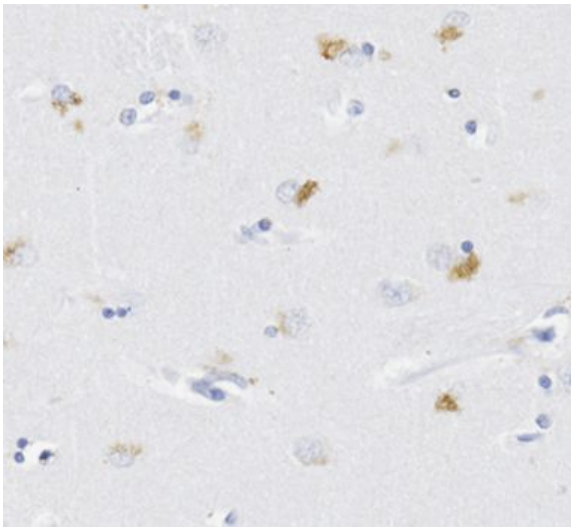
L-Kynurenine

L-Kynurenine, the first stable by-product of the kynurenine pathway, is synthesized from L-Tryptophan by indoleamine 2,3-dioxygenase (IDO1/2) or tryptophan 2,3-dioxygenase (TDO2) enzymes. Acting as an endogenous ligand of Aryl hydrocarbon Receptor (AhR), L-Kunrenine exerts anti-inflammatory effects and promotes glioma progression. L-kynurenine is also widely used as a biomarker of tryptophan catabolism and kynurenine pathway activation in immune-related and neurological disorders.



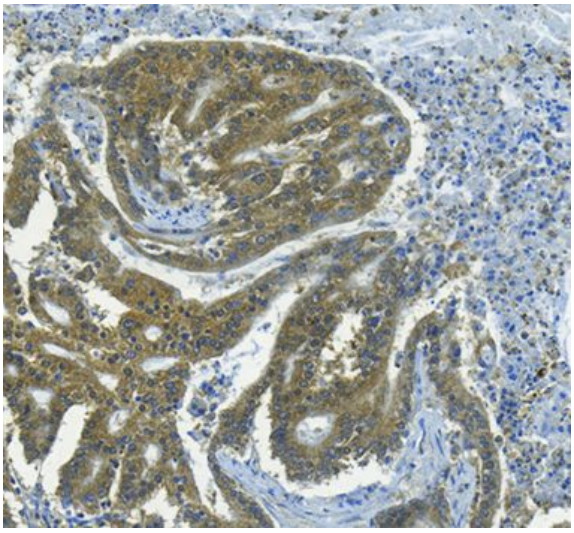
Affinity & Specificity of anti- L-Kynurenine mAb 3D4-F2

Competitive ELISA demonstrates that low amounts of L-Kynurenine conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of 3-OH-Kynurenine conjugate do not affect reaction (high specificity).



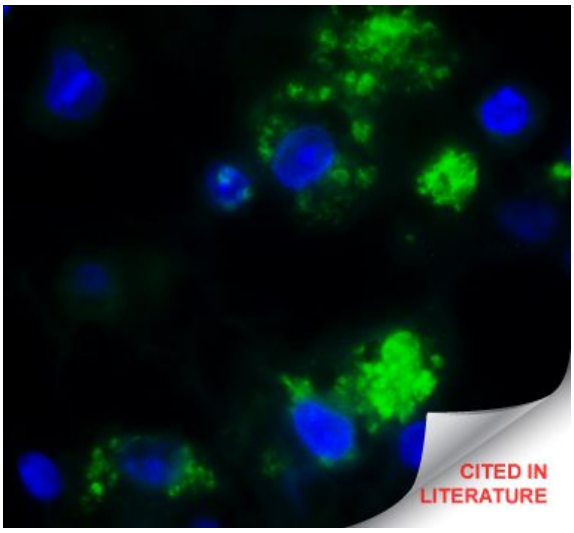
L-Kynurenine detection in human brain tissue by IHC

Detection of L-Kynurenine in glial cells in human caudate putamen. Paraffin-embedded tissue section was subjected to pH=6 antigen retrieval followed by overnight incubaton with primary antibody (dilution 1/500). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.



L-Kynurenine detection in human colon cancer tissue by IHC

Immunohistochemical staining of human colorectal cancer tissue shows cytoplasmic accumulation of L-Kynurenine in tumour cells. Paraffin-embedded tissue section was subjected to pH=6 antigen retrieval, and overnight incubation with primary antibody (1/500 dilution). A polymer-conjugated secondary Ab was added and immunostaining was revealed using DAB.



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Contact information

IMMUSMOL SAS
87 Avenue d'Arès
33200 Bordeaux - France
+33 (0) 5 47 30 27 72
contact@immusmol.com

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

https://www.immusmol.com/l-kynurenine-antibody-ihc-mouse-monoclonal-ab.html