L-Kynurenine Monoclonal 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
Validated applications	IHC / IF
Reactivity	Reacts with all species
References	5 citations
Format	50µL

INFORMATIONS

Product overview

Product name	L-Kynurenine antibody
Synonyms	(S)-Kynurenine antibody L-2-Amino-4-(2-aminophenyl)-4-oxobutanoic acid antibody Kynurenin antibody 3-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

Storage

Form	Liquid
Purity	Purified IgG
Concentration	0,5mg/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

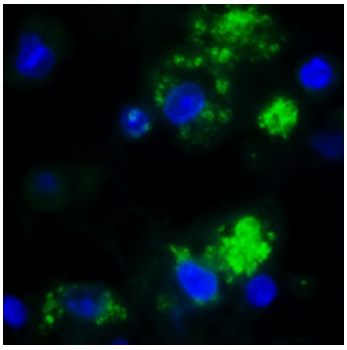
PROTOCOLS

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

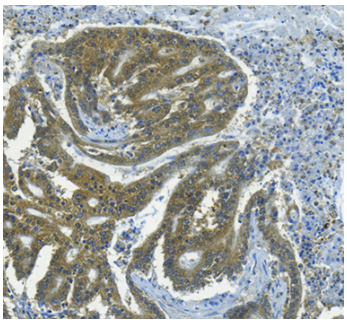
Product citation

Product pictures



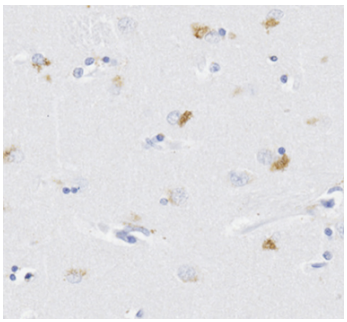
L-Kynurenine visualization in human intestinal immune cells by IF

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.



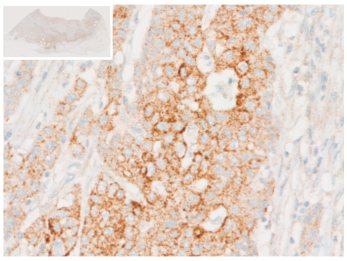
L-Kynurenine detection in human colon cancer tissue by IHC

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.



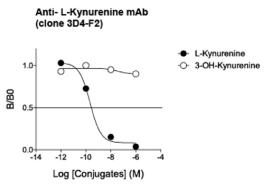
L-Kynurenine detection in human brain tissue by IHC

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



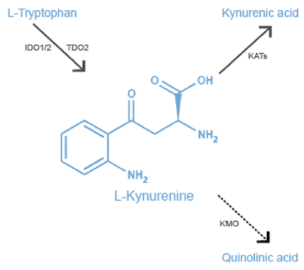
Immunohistochemical analysis reveals accumulation of L-Kynurenine within tumor cells of human colorectal cancer (CRC) tissue.

Using DiscoveryUltra™ platform (Ventana), a paraffin-embedded tissue section of CRC was subjected to antigen retrieval, and incubation with primary anti-KYN monoclonal antibody. Presence of Kynurenine was then evaluated through the use of a DAB conjugated secondary antibody. Image (x40 magnification) was acquired using Polaris Vectra (Perkin Elmer) automated slide scanner.



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

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.

Contact information

Immusmol
229 Cours de l’Argonne

33 000 Bordeaux - France
Tel: +33 (0) 5 6431 1170
www.immusmol.com

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

https://www.immusmol.com/shop/l-kynurenine-mab/