Kynurenic acid polyclonal antibody

Ref: IS1011

The anti-Kynurenic acid (KYNA) rabbit polyclonal antibody proved to work at **1/2000** dilution on paraffin-embedded tissues, a single vial thus catering for approximately 400 stainings.

Clonality	Polyclonal antibody
Host	Rabbit (see anti-KYNA mouse mAb)
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	Kynurenic acid polyclonal antibody
Synonyms	Kinurenic acid polyclonal antibody 4-Hydroxyquinoline-2-carboxylic acid polyclonal antibody KYNA polyclonal antibody
Immunogen	Conjugated kynurenic acid
Specificity	When tested in competitive ELISA, the anti-Kynurenic polyclonal antibody did not show any significant cross reactivity with Quinaldic and Xanthurenic conjugates.
Lot number	140401

Reconstitution & storage

Form	Lyophilized powder
Purity	Purified anti-serum
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
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only

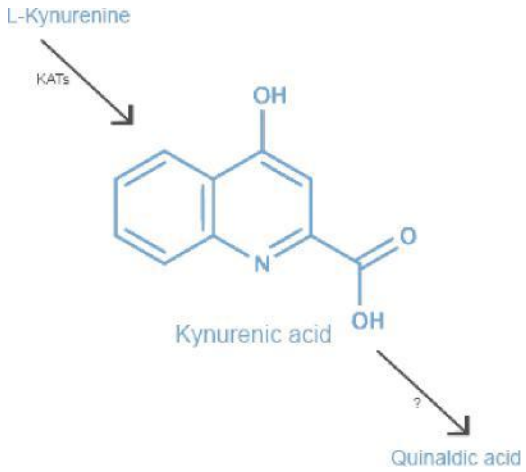
References

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

Selected articles on Kynurenic acid:

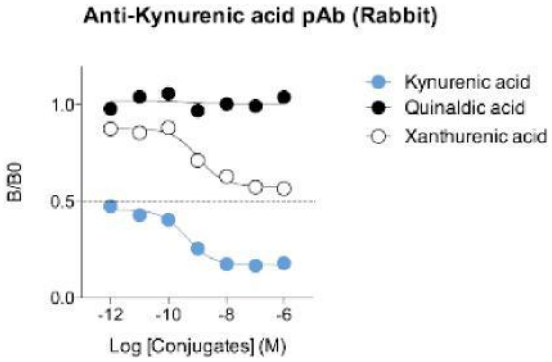
- Justinova Z et al. Reducing cannabinoid abuse and preventing relapse by enhancing endogenous brain levels of kynurenic acid. Nat Neurosci. 2013 Nov;16(11):1652-61. doi: 10.1038/nn.3540. Epub 2013 Oct 13.
- Stone TW, Stoy N, Darlington LG. An expanding range of targets for kynurenine metabolites of tryptophan. Trends Pharmacol Sci. 2013 Feb;34(2):136-43. doi: 10.1016/j.tips.2012.09.006. Epub 2012 Nov 1.
- 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.
- Moroni F, Cozzi A, Sili M, Mannaioni G. Kynurenic acid: a metabolite with multiple actions and multiple targets in brain and periphery. J Neural Transm. 2012 Feb;119(2):133-9. doi: 10.1007/s00702-011-0763-x. Epub 2012 Jan 4.
- Linderholm KR et al. Increased levels of kynurenine and kynurenic acid in the CSF of patients with schizophrenia. Schizophr Bull. 2012 May;38(3):426-32. doi: 10.1093/schbul/sbq086. Epub 2010 Aug 20.
- Stone TW, Forrest CM, Darlington LG. Kynurenine pathway inhibition as a therapeutic strategy for neuroprotection. FEBS J. 2012 Apr;279(8):1386-97. doi: 10.1111/j.1742-4658.2012.08487.x. Epub 2012 Mar 27.

Product pictures



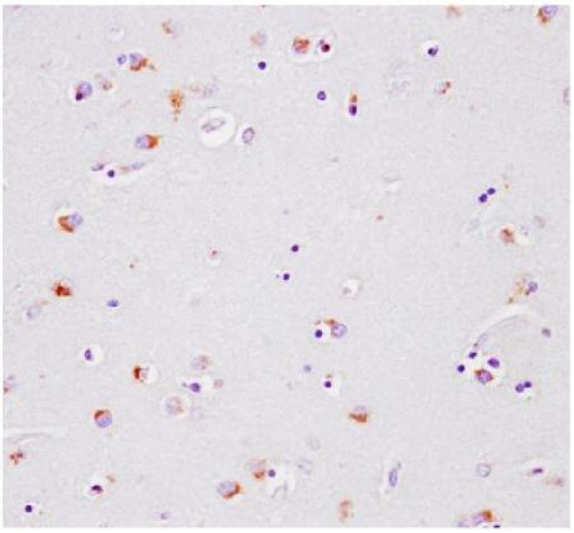
Kynurenic acid (KYNA)

L-tryptophan catabolism via the kynurenine pathway produces a range of neuroactive metabolites, including neurotoxic quinolinic acid and its neuroprotective counterpart: kynurenic acid. Known for its antagonistic activities on the NMDA receptor and the a7-nicotinic cholinoceptor (a7NR), Kynurenic acid has recently been described as an endogenous ligand of the orphan G-protein-coupled receptor GPR35.



Affinity & specificity of the Kynurenic acid polyclonal antibody

Competitive ELISA highlights that low amounts of conjugated Kynurenic acid are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of analog conjugates (Quinaldic and Xanthurenic acid) affect only to a lesser extent the reaction (high specificity).



Kynurenic acid detection in human caudate putamen by IHC

Immunohistochemistry (IHC) reveals kynurenic acid accumulation in the cytoplasm of glial cells in human caudate putamen. Paraffin-embedded brain tissue section was subjected to pH=6 antigen retrieval followed by overnight incubation with the primary anti-kynurenic acid polyclonal antibody (dilution 1/2000). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.

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