

# Kynurenic acid Monoclonal Antibody

Ref: IS010

The monoclonal 4G12-A12 anti-Kynurenic acid antibody was validated for IHC and IF in human caudate putamen tissues. Competitive ELISA demonstrated the antibody to be highly affine and specific.

<b>Clonality</b>	Monoclonal antibody (clone 4G12-A12)
<b>Host</b>	Mouse
<b>Validated applications</b>	<a href="#">IHC / IF</a>
<b>Specie reactivity</b>	Reacts with all species
<b>References</b>	Not yet cited to our knowledge. Submit content and <a href="#">get a 10% discount!</a>
<b>Format</b>	50µL

## INFORMATIONS

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### Product overview

<b>Product name</b>	Kynurenic acid antibody
<b>Synonyms</b>	Kinurenic acid antibody 4-Hydroxyquinoline-2-carboxylic acid antibody KYNA antibody
<b>Immunogen</b>	Conjugated kynurenic acid
<b>Isotype</b>	IgG1 k chain
<b>Clone</b>	clone 4G12-A12
<b>Specificity</b>	When tested in competitive ELISA, the anti-Kynurenic antibody 4G12-A12 did not show any significant cross reactivity with Quinaldic, Xanthurenic, Anthranilic, Picolinic or Quinolinic acid conjugates

### Storage

<b>Form</b>	Liquid
<b>Purity</b>	Purified IgG
<b>Concentration</b>	0,5mg/ml
<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>

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## PROTOCOLS

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<b>Immunohistochemistry (IHC)</b>	Dilute at 1:200-1:2000. Perform heat antigen retrieval (pH=6) before initiating IHC staining protocol on paraffin-embedded and frozen sections
<b>Immunofluorescence (IF)</b>	1:100-1:1000 on paraffin-embedded and frozen sections. Before staining, perform heat antigen retrieval
<b>Comments</b>	Optimal working dilutions must be determined by the end-user
<b>Restrictions</b>	For research use only

## REFERENCES

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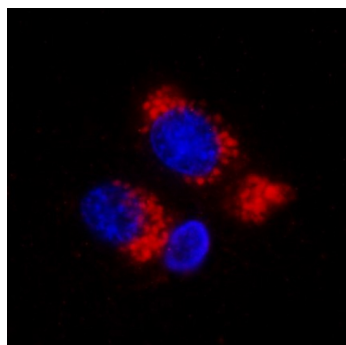
Antibody not yet cited. Submit an article and get a 10% discount.

### Selected articles on Kynurenic acid

- [Justinova Z, Mascia P, Wu HQ, Secci ME, Redhi GH, Panlilio LV, Scherma M, Barnes C, Parashos A, Zara T, Fratta W, Solinas M, Pistis M, Bergman J, Kangas BD, Ferré S, Tanda G, Schwarcz R, Goldberg SR. 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, Skogh E, Olsson SK, Dahl ML, Holtze M, Engberg G, Samuelsson M, Erhardt S. 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.](#)

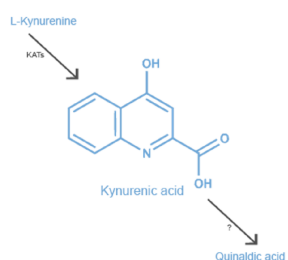
## Product pictures

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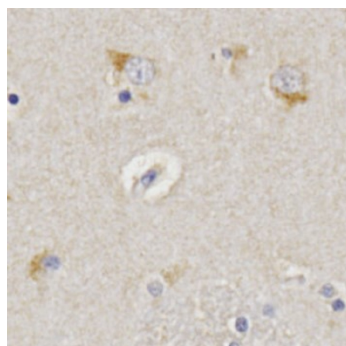
### Kynurenic acid detection in human brain by IF (mouse mAb)

Immunofluorescence shows kynurenic acid accumulation in the cytoplasm of glial cells in human caudate-putamen. Paraffin-embedded tissue section was subjected to pH=6 antigen retrieval followed by overnight incubation with primary anti-Kynurenic acid antibody (dilution 1/250). After incubation with fluorescent dye-conjugated secondary Ab, epifluorescence microscopy (100X) was used to visualize the staining.



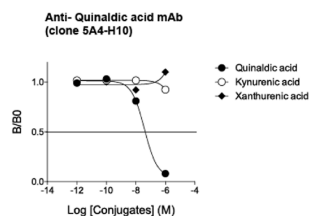
## Kynurenic acid

Aerobic L-tryptophan degradation via the kynurenine pathway produces a range of neuroactive metabolites, including endogenous neurotoxin quinolinic acid and neuroprotective kynurenic acid. Kynurenic acid indeed possesses several molecular targets with antagonistic activities on the NMDA receptor and the  $\alpha 7$ -nicotinic cholinergic receptor ( $\alpha 7$ NR). Recently Kynurenic acid was also described to activate the orphan G-protein-coupled receptor GPR35.



## Kynurenic acid detection in human brain by IHC

Immunohistochemical analysis highlights cytoplasmic presence of kynurenic acid in glial cells in human caudate putamen. Paraffin-embedded brain tissue section was subjected to pH=6 antigen retrieval followed by overnight incubation with primary anti-kynurenic acid antibody (dilution 1/500). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.



## Affinity & Specificity of anti-Quinaldic acid antibody

Competitive ELISA demonstrates that moderate amounts of Quinaldic acid conjugate are required to abolish antigen-antibody reaction (satisfying affinity), while rising concentrations of Kynurenic and Xanthurenic acid conjugates do not affect the reaction (high specificity).

# Contact information

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

<https://www.immusmol.com/shop/kynurenic-acid-mab/>