

# Quinolinic acid polyclonal antibody

Ref: IS1010

Validated for IHC in human brain tissues, the anti-Quinolinic acid (QUIN) rabbit polyclonal antibody proved to work at **1/1000** dilution on paraffin-embedded sections, a single vial thus catering for approximately 200 stainings.

<b>Clonality</b>	Polyclonal antibody
<b>Host</b>	Rabbit ( <a href="#">see anti-QUIN mouse mAb</a> )
<b>Valided applications</b>	<a href="#">IHC</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

# Product information

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## Product overview

<b>Product name</b>	Quinolinic acid polyclonal antibody
<b>Synonyms</b>	Pyridine-2,3-dicarboxylic acid polyclonal antibody Anti-quinolinate polyclonal antibody Anti-QUIN polyclonal antibody
<b>Immunogen</b>	Conjugated quinolinic acid
<b>Specificity</b>	When tested in competitive ELISA, the anti-Quinolinic acid polyclonal antibody did not show any significant cross reactivity with Picolinic and anthranilic acids conjugates
<b>Lot number</b>	140401

## Reconstitution & storage

<b>Form</b>	Lyophilized powder
<b>Purity</b>	Purified anti-serum
<b>Storage</b>	Store at 4°C
<b>Storage buffer</b>	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

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<b>Immunohistochemistry (IHC)</b>	Dilute at 1:200-1:2000. Perform heat antigen retrieval (pH=9) before initiating IHC staining protocol on paraffin-embedded and frozen sections
<b>Comments</b>	Optimal working dilutions must be determined by the end-user
<b>Restrictions</b>	For research use only

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## References

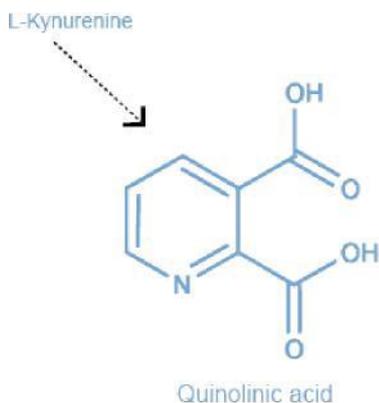
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Antibody not yet cited. Submit an article and [get a 10% discount!](#)

Selected publications about Quinolinic acid:

- [Lugo-Huitrón R et al. Quinolinic acid: an endogenous neurotoxin with multiple targets. Oxid Med Cell Longev. 2013;2013:104024. doi: 10.1155/2013/104024. Epub 2013 Sep 5. Review.](#)
- [Wu W et al. Expression of tryptophan 2,3-dioxygenase and production of kynurenine pathway metabolites in triple transgenic mice and human Alzheimer's disease brain. PLoS One. 2013 Apr 22;8\(4\):e59749. doi: 10.1371/journal.pone.0059749. Print 2013](#)
- [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.](#)
- [Guillemin GJ. Quinolinic acid, the inescapable neurotoxin. FEBS J. 2012 Apr;279\(8\):1356-65. doi: 10.1111/j.1742-4658.2012.08485.x. Epub 2012 Mar 27. Review](#)

# Product pictures

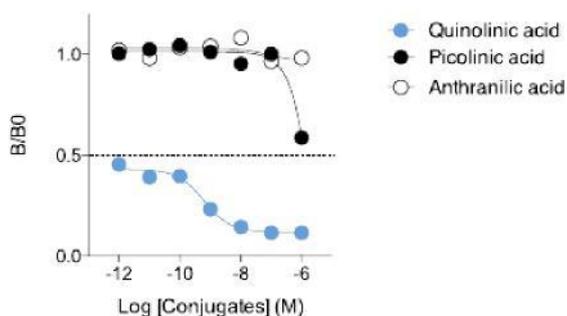


## Quinolinic acid (QUIN)

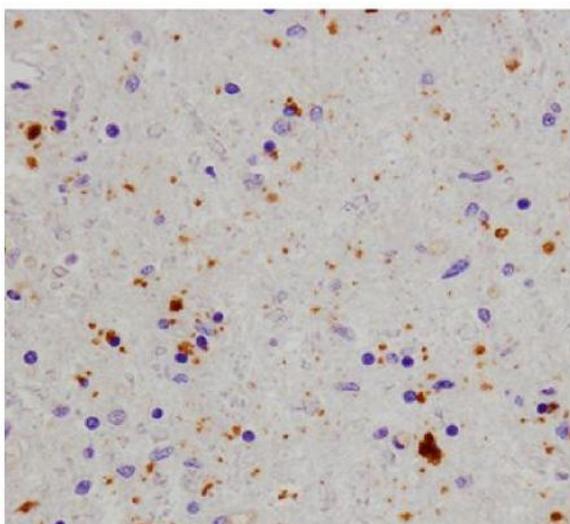
Tryptophan depletion through the kynurenine pathway produces several neuroactive metabolites, with endogenous neurotoxin Quinolinic acid as a chief de file. Known for its excitotoxic profile, Quinolinic acid induces neuronal damage through NMDA receptor overactivation, oxidative stress and mitochondrial dysfunction. The endotoxin has been found to be involved in several CNS disorders, including neurodegenerative diseases (Amyotrophic lateral sclerosis, Alzheimer's & Parkinson's diseases, ...) and psychiatric disorders (depression, schizophrenia, ...).

## Affinity & specificity of anti-Quinolinic polyclonal antibody

### Anti-Quinolinic acid pAb (Rabbit)



Competitive ELISA highlights that low amounts of conjugated Quinolinic acid conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of analog conjugates (Picolinic and Anthranilic acids) do not affect the reaction (high specificity).



## Quinolinic acid detection in human parkinson's brain

Immunohistochemistry (IHC) reveals the presence of Quinolinic acid in glial cells in human parkinsonian midbrain tissue. Paraffin-embedded tissue section was subjected to pH=9 antigen retrieval followed by overnight incubation with primary anti-quinolinic acid polyclonal antibody (dilution 1/1000). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.

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