

Quinolinic acid Monoclonal Antibody

Ref: IS002

Confirmed to be highly specific and affine by competitive ELISA, the monoclonal anti- Quinolinic acid antibody 4E11-G3 was validated for immunofluorescence (IF) and immunohistochemistry (IHC) in human midbrain tissues.

Clonality	Monoclonal antibody (clone 4E11-G3)
Host	Mouse
Validated applications	IHC / IF
Reactivity	Reacts with all species
References	Not yet cited to our knowledge Submit content and get a 10% discount!
Format	50µL

INFORMATIONS

Product overview

Product name	Quinolinic acid antibody
Synonyms	Pyridine-2,3-dicarboxylic acid antibody 2,3-pyridinedicarboxylic acid antibody 3,4-Pyridinedicarboxylic acid antibody Pyridine-3,4-dicarboxylic acid antibody
Immunogen	Conjugated quinolinic acid
Isotype	IgG1 k chain
Clone	clone 4E11-G3
Specificity	When tested in competitive ELISA, the anti-Quinolinic acid antibody did not show any significant cross reactivity with Picolinic and Quinaldic acid conjugates
Lot number	140201
Expiration date	2025-02-01

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 1:100-1:1000. Perform heat antigen retrieval (pH=9) before initiating IHC staining protocol on paraffin-embedded and frozen sections
Immunofluorescence (IF)	Dilute at 1:50-1:500 on paraffin-embedded and frozen sections. Perform heat antigen retrieval and incubate fluorescent dyes conjugated secondary antibody
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only

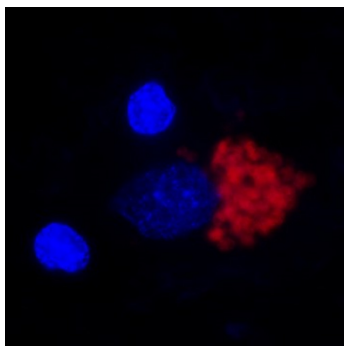
REFERENCES

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

Selected publications about Quinolinic acid:

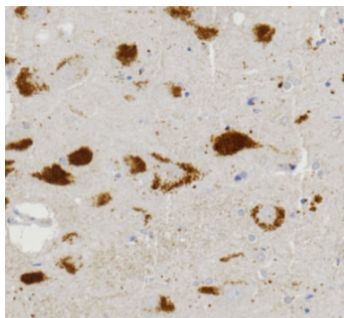
- [Lugo-Huitrón R, Ugalde Muñiz P, Pineda B, Pedraza-Chaverrí J, Ríos C, Pérez-de la Cruz V. Quinolinic acid: an endogenous neurotoxin with multiple targets. Oxid Med Cell Longev. 2013;2013:104024. doi: 10.1155/2013/104024. Epub 2013 Sep 5. Review.](#)
- [Wu W, Nicolazzo JA, Wen L, Chung R, Stankovic R, Bao SS, Lim CK, Brew BJ, Cullen KM, Guillemin GJ. 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



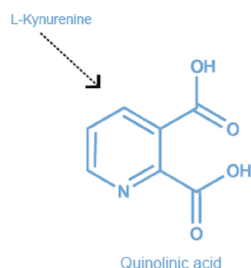
Quinolinic acid detection in human midbrain by immunohistofluorescence (IHF)
Quinolinic acid detection in human midbrain by immunohistofluorescence (IHF)
Quinolinic acid detection in human midbrain by immunohistochemistry (IHC)
Anti-Quinolinic acid antibody affinity & specificity
Quinolinic acid detection in human midbrain by immunohistofluorescence (IHF)

Immunofluorescence staining highlights nuclear exclusion of Quinolinic acid in human midbrain. Paraffin-embedded brain tissue section was subjected to pH=9 antigen retrieval followed by overnight incubation with primary anti-Quinolinic acid antibody (dilution 1/250). After incubation with Alexa-555 conjugated secondary Ab, epifluorescence microscopy (100X) was used to visualize the staining.



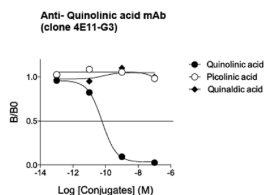
Quinolinic acid detection in human midbrain by immunohistochemistry (IHC)

Immunohistochemical analysis reveals cytoplasmic presence of Quinolinic acid in human midbrain tissue. Paraffin-embedded tissue section was subjected to pH=9 antigen retrieval followed by overnight incubation with primary anti-quinolinic acid antibody (dilution 1/500). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.



Quinolinic acid

Tryptophan catabolism along the kynurenine pathway produces neuroactive metabolites, with prototypical neurotoxin Quinolinic acid as a 'chef de file'. Known to be involved in a wide range of neurodegenerative diseases (Amyotrophic lateral sclerosis, Alzheimer's & Parkinson's diseases, ...) as well as psychiatric disorders (depression, schizophrenia, ...), Quinolinic acid induces neuronal damage. Activation of the NMDA-receptor, oxidative stress induction or mitochondrial dysfunction could explain quinolinic acid-induced neurotoxicity.



Anti-Quinolinic acid antibody affinity & specificity

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

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

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