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TH Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2215a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P07101
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	1B8D2
Isotype	IgG1
Calculated MW	58600
Description	The protein encoded by this gene is involved in the conversion of tyrosine to dopamine. It is the rate-limiting enzyme in the synthesis of catecholamines, hence plays a key role in the physiology of adrenergic neurons. Mutations in this gene have been associated with autosomal recessive Segawa syndrome. Alternatively spliced transcript variants encoding different isoforms have been noted for this gene.
Immunogen	Purified recombinant fragment of human TH (AA: 44-208) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	7054
Other Names	Tyrosine 3-monooxygenase, 1.14.16.2, Tyrosine 3-hydroxylase, TH, TH, TYH
Dilution	WB~~1/500 - 1/2000 IHC~~1:100~500 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TH Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TH (HGNC:11782)
Synonyms	TYH

Function	Catalyzes the conversion of L-tyrosine to L- dihydroxyphenylalanine (L-Dopa), the rate-limiting step in the biosynthesis of catecholamines, dopamine, noradrenaline, and adrenaline. Uses tetrahydrobiopterin and molecular oxygen to convert tyrosine to L-Dopa (PubMed:15287903, PubMed:1680128, PubMed:17391063, PubMed:24753243, PubMed:34922205, PubMed:8528210, Ref.18). In addition to tyrosine, is able to catalyze the hydroxylation of phenylalanine and tryptophan with lower specificity (By similarity). Positively regulates the regression of retinal hyaloid vessels during postnatal development (By similarity).
Cellular Location	Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P24529}. Nucleus {ECO:0000250|UniProtKB:P04177} Cell projection, axon {ECO:0000250|UniProtKB:P24529}. Cytoplasm {ECO:0000250|UniProtKB:P04177}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle {ECO:0000250|UniProtKB:P04177}. Note=When phosphorylated at Ser-19 shows a nuclear distribution and when phosphorylated at Ser-31 as well at Ser-40 shows a cytosolic distribution (By similarity). Expressed in dopaminergic axons and axon terminals. {ECO:0000250|UniProtKB:P04177}
Tissue Location	Mainly expressed in the brain and adrenal glands.

References

1.Neurosci Lett. 2014 Jan 24;559:39-43.2.Biochem Biophys Res Commun. 2011 Nov 4;414(4):712-8.

Images