Tyrosine Hydroxylase Antibody

Lot Number: QB1979641

Product Data Sheet

Tested Species Reactivity	Published Species Reactivity
Many (Many)	Human (Hu)
	Mouse (Ms)
	Rat (Rt)

Tested Applications	Dilution *
Western Blot (WB)	1:1,000
Immunofluorescence (IF)	1:1,000
Immunohistochemistry (Frozen) (IHC (F))	1:1,000
Published Applications	**Dilution**
Immunohistochemistry (IHC)	See publications

* Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own experiment using appropriate negative and positive controls.

Details	
Catalog Number:	OPA1-04050
Size:	100 µl
Class:	Polyclonal
Type:	Antibody
Clone:	
Host / Isotype:	Rabbit /
Immunogen:	SDS-denatured, native rat tyrosine hydroxylase purified from pheochromocytoma

Form Information	
Form:	Liquid
Purification:	Affinity chromatography
Storage Buffer:	0.01M HEPES, pH 7.5, with 0.15M NaCl, 0.1mg/ml BSA, 50% glycerol
Preservative:	no preservative
Storage Conditions:	-20° C, Avoid Freeze/Thaw Cycles

Product Specific Information

In Western blot, this antibody detects a single ~60 kDa protein representing tyrosine hydroxylase from rat brain lysates of PC-12 cells stimulated by okadaic acid. Immunohistochemical staining of TH in human brain with OPA1-04050 results in intense labeling of the dopaminergic neurons in the substantia nigra.

Store at -20ºC short term, 80ºC long term.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

General Information

Tyrosine hydroxylase (TH) is the rate-limiting enzyme in the synthesis of the catecholamine neurotransmitters (dopamine, epinephrine, and norepinephrine). It is responsible for the conversion of L-tyrosine to L-dopa in the catecholamine synthesis pathway. In all species, catecholamine synthesis is regulated by the interaction of TH with a cofactor, tetrahydrobiopterin (BH4). BH4 binds to the TH catalytic domain, resulting in enzymatic activity. Unlike TH in non-primate species, four human TH mRNA splice variants (hTH1-hTH4) have been isolated. These variants are identical in their catalytic domain, but differ in their N-terminal, regulatory domains. Little information has been uncovered regarding the regulatory role of these isoforms in vivo.

The role of TH in the synthesis of catecholamine neurotransmitters suggests a correlation between the enzyme and a number of neuropathogenic diseases characterized by irregular catecholamine levels. Catecholamine level irregularities have been uncovered in Parkinson's disease, schizophrenia, and dystonia, as well as a variety of cardiovascular diseases.

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