

Anti-Tyrosine Hydroxylase Antibody



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Antibodies that work™

Catalog #: 2027-THSHP

Size: 100 µl

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Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Sheep	WB 1:1000 IF 1:1000 (frozen sections) IHC 1:1000 (frozen sections)	All Mammalian		~60 kDa

Product Description: Affinity purified sheep polyclonal antibody.

Biological Significance: Tyrosine hydroxylase (TH) is the rate-limiting enzyme in the synthesis of the catecholamines dopamine and norepinephrine. TH antibodies can therefore be used as markers for dopaminergic and noradrenergic neurons in a variety of applications including depression, schizophrenia, Parkinson's disease and drug abuse (Kish et al., 2001; Zhu et al., 2000; Zhu et al., 1999). TH antibodies can also be used to explore basic mechanisms of dopamine and norepinephrine signaling (Witkovsky et al., 2000; Salvatore et al., 2001, Dunkley et al., 2004).

Antigen: Native rat tyrosine hydroxylase, purified from pheochromocytoma.

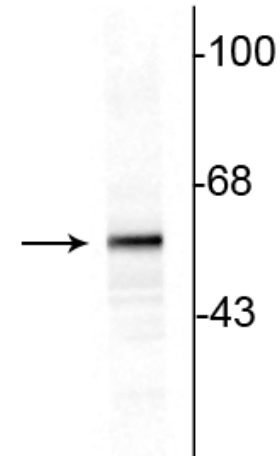
Antibody Specificity: Specific for endogenous levels of the ~60 kDa tyrosine hydroxylase protein.

Purification Method: Prepared from pooled sheep serum by affinity purification using a column to which the fusion protein immunogen was coupled.

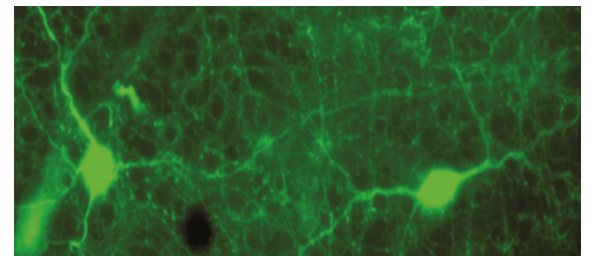
Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of 10 µg of rat striatal lysate showing specific immunolabeling of the ~60 kDa tyrosine hydroxylase protein



Immunostaining of rabbit retina showing specific labeling of tyrosine hydroxylase in green.

Product Specific References:

Zhu MY, Klimek V, Haycock JW, Ordway GA (2000) Quantitation of tyrosine hydroxylase protein in the locus coeruleus from postmortem human brain. *J Neurosci Meth* 99:37-44.

General References:

Dunkley PR, Bobrovskaya L, Graham ME, Von Nagy-Felsobuki EI, Dickson PW (2004) Tyrosine hydroxylase phosphorylation: regulation and consequences. *J Neurochem* 91:1025-1043.

Kish SJ, Kalasinsky KS, Derkach P, Schmunk GA, Guttman M, Ang L, Adams V, Furukawa Y, Haycock JW (2001) Striatal dopaminergic and serotonergic markers in human heroin users. *Neuropsychopharmacology* 24:561-567.

Salvatore MF, Waymire JC, Haycock JW (2001) Depolarization-stimulated catecholamine biosynthesis: involvement of protein kinases and tyrosine hydroxylase phosphorylation sites *in situ*. *J Neurochem* 79:349-360.

Witkovsky P, Gabriel R, Haycock JW, Meller E (2000) Influence of light and neural circuitry on tyrosine hydroxylase phosphorylation in the rat retina. *J Chem Neuroanat* 19:105-116.

Zhu MY, Klimek V, Dilley GE, Haycock JW, Stockmeier C, Overholser JC, Meltzer HY, Ordway GA (1999) Elevated levels of tyrosine hydroxylase in the locus coeruleus in major depression. *Biol Psychiatry* 46:1275-1286.