10320 Camino Santa Fe, Suite G
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Tyrosine Hydroxylase Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1061

Specification

Tyrosine Hydroxylase Antibody - Product Information

Application	**FC, WB, IHC**
Primary Accession	P04177
Reactivity	**Bovine, Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**60 KDa**

Tyrosine Hydroxylase Antibody - Additional Information

Gene ID	**25085**
Gene Name	**TH**

Other Names
Tyrosine 3-monooxygenase, Tyrosine 3-hydroxylase, TH, Th

Target/Specificity
SDS-denatured, native rat tyrosine hydroxylase purified from pheochromocytoma.

Dilution
FC~~1:1000
WB~~ 1:1000
IHC~~1:1000

Format
Prepared from rabbit serum by affinity purification using a protein A column and using a column to which the immunogen was coupled

Antibody Specificity
Specific for the ~60k tyrosine hydroxylase protein.

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
Tyrosine Hydroxylase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Tyrosine Hydroxylase Antibody - Protocols

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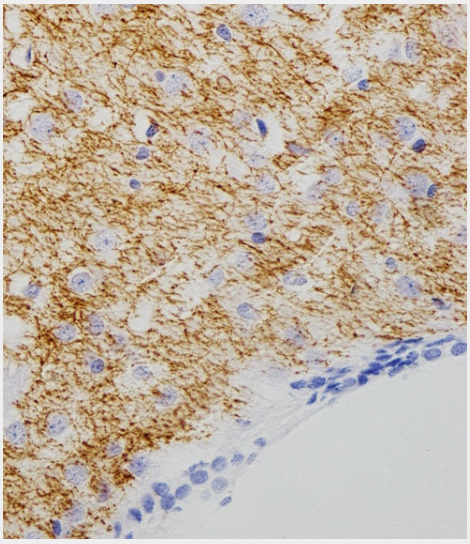
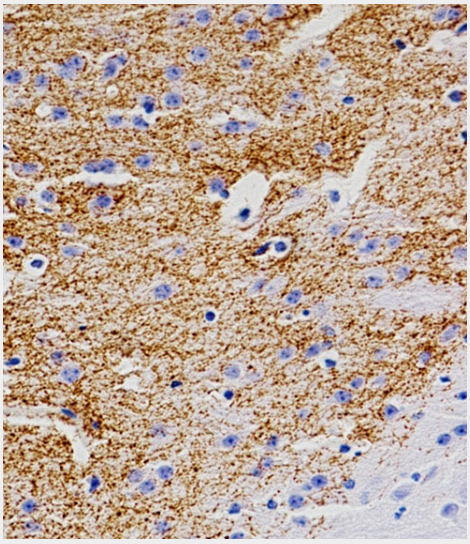
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Tyrosine Hydroxylase Antibody - Images



Immunohistochemical analysis of paraffin-embedded R. brain section using Tyrosine Hydroxylase Antibody (Cat#AN1061). AN1061 was diluted at 1:1000 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded M. brain section using Tyrosine Hydroxylase Antibody (Cat#AN1061). AN1061 was diluted at 1:1000 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

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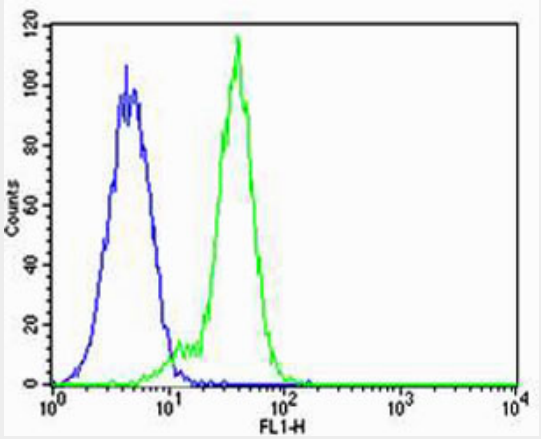
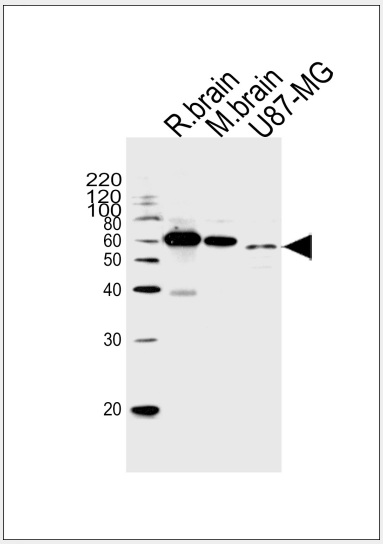
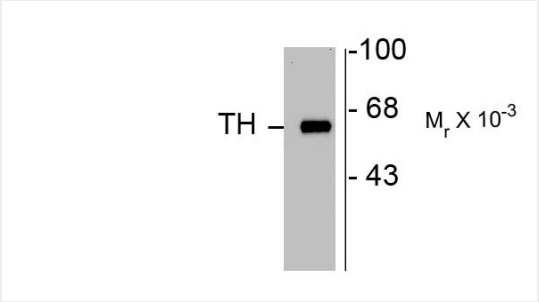


Flow cytometric analysis of PC-12 cells using Park7 (DJ-1) Antibody(green, Cat#AN1061) compared to an isotype control of rabbit IgG(blue). AN1061 was diluted at 1:1000 dilution. An Alexa Fluor® 488 goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody.



Western blot analysis of lysates from rat brain, mouse brain tissue lysate and U87-MG cell line(from left to right), using Th Antibody(Cat. #AN1061). AN1061 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



Western blot of 10 ug of rat caudate lysate showing specific immunolabeling of the ~60k TH protein.

Tyrosine Hydroxylase Antibody - Background

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).

Tyrosine Hydroxylase Antibody - 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.
Xu ZQ, Lew JY, Harada K, Aman K, Goldstein M, Deutch A, Haycock JW, Hokfelt T (1998) Immunohistochemical studies on phosphorylation of tyrosine hydroxylase in central catecholamine neurons using site- and phosphorylation state-specific antibodies. Neurosci 82:727-738.
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.
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.