

**TH Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP6945b****Specification**

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**TH Antibody (C-term) - Product Information**

Application	WB, IHC-P, FC,E
Primary Accession	<a href="#">P07101</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	58600
Antigen Region	486-514

**TH Antibody (C-term) - Additional Information****Gene ID** 7054**Other Names**

Tyrosine 3-monooxygenase, Tyrosine 3-hydroxylase, TH, TH, TYH

**Target/Specificity**

This TH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 486-514 amino acids from the C-terminal region of human TH.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100  
FC~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

TH Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**TH Antibody (C-term) - 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

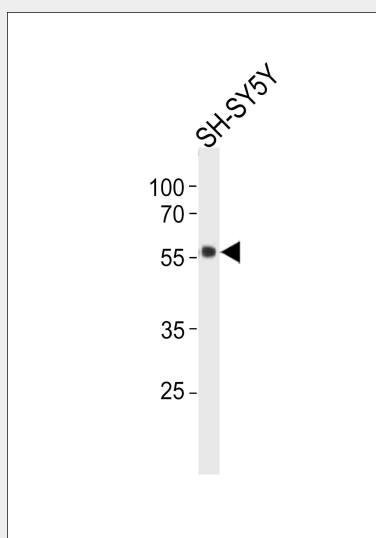
Mainly expressed in the brain and adrenal glands.

#### TH Antibody (C-term) - Protocols

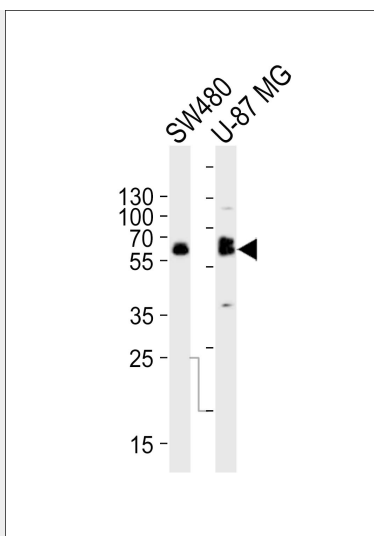
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

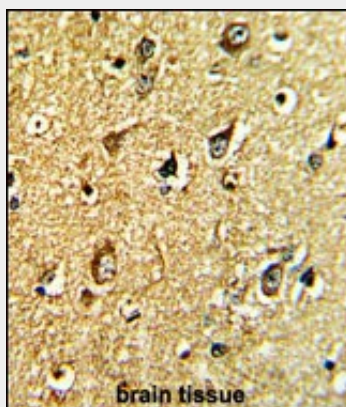
#### TH Antibody (C-term) - Images



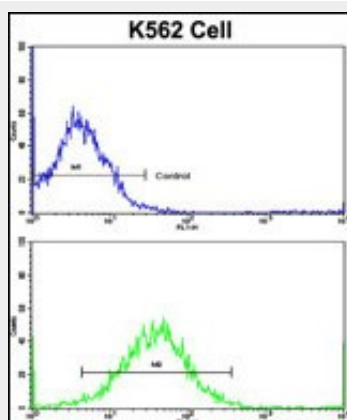
TH Antibody (C-term) (Cat. #AP6945b) western blot analysis in SH-SY5Y cell line lysates (35ug/lane). This demonstrates the TH antibody detected the TH protein (arrow).



Western blot analysis of lysates from SW480, U-87 MG cell line (from left to right), using TH Antibody (C-term)(Cat. #AP6945b). AP6945b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



Formalin-fixed and paraffin-embedded human brain tissue with TH Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of K562 cells using TH Antibody (C-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

**TH Antibody (C-term) - Background**

TH 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.

**TH Antibody (C-term) - References**

Kuhn,D.M., et.al., J. Biol. Chem. 277 (16), 14336-14342 (2002)