

**Anti-Tyrosine Hydroxylase Picoband Antibody**  
Catalog # ABO12138**Specification****Anti-Tyrosine Hydroxylase Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P07101</a>
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Tyrosine 3-monoxygenase(TH) detection. Tested with WB, IHC-P in Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Tyrosine Hydroxylase Picoband Antibody - Additional Information**

**Gene ID** 7054

**Other Names**

Tyrosine 3-monoxygenase, 1.14.16.2, Tyrosine 3-hydroxylase, TH, TH, TYH

**Calculated MW**

58600 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Mouse, Rat, Human, By Heat  
Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

**Tissue Specificity**

Mainly expressed in the brain and adrenal glands.

**Protein Name**

Tyrosine 3-monoxygenase

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human Tyrosine Hydroxylase (193-222aa KVPWFPRKVSELDKCHHLVTKFDPDLDDH), identical to the related mouse and rat sequences.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the bipterin-dependent aromatic amino acid hydroxylase family.

**Anti-Tyrosine Hydroxylase Picoband Antibody - 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:<a href="http://www.uniprot.org/citations/15287903" target="\_blank">15287903</a>, PubMed:<a href="http://www.uniprot.org/citations/1680128" target="\_blank">1680128</a>, PubMed:<a href="http://www.uniprot.org/citations/17391063" target="\_blank">17391063</a>, PubMed:<a href="http://www.uniprot.org/citations/24753243" target="\_blank">24753243</a>, PubMed:<a href="http://www.uniprot.org/citations/34922205" target="\_blank">34922205</a>, PubMed:<a href="http://www.uniprot.org/citations/8528210" target="\_blank">8528210</a>, 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.

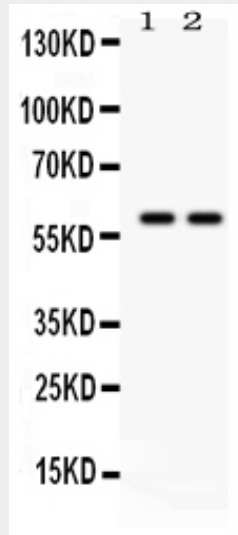
**Anti-Tyrosine Hydroxylase Picoband Antibody - Protocols**

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

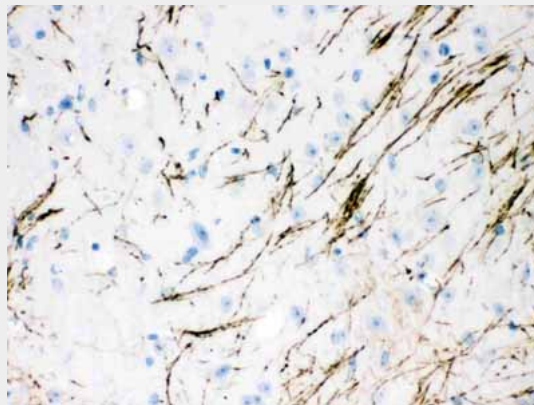
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

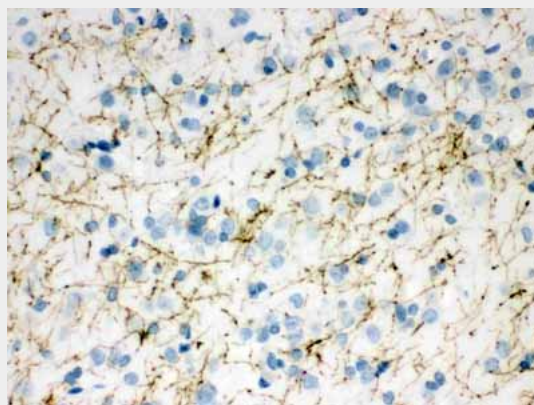
### Anti-Tyrosine Hydroxylase Picoband Antibody - Images



Anti- Tyrosine Hydroxylase Picoband antibody, ABO12138, Western blotting  
All lanes: Anti Tyrosine Hydroxylase (ABO12138) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Mouse Brain Tissue Lysate at 50ug  
Predicted bind size: 59KD  
Observed bind size: 59KD



Anti- Tyrosine Hydroxylase Picoband antibody, ABO12138, IHC(P) IHC(P): Mouse Brain Tissue



Anti- TH Picoband antibody, ABO12138, IHC(P) IHC(P): Rat Brain Tissue

## **Anti-Tyrosine Hydroxylase Picoband Antibody - Background**

TH is equal to tyrosine hydroxylase. 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. In humans, tyrosine hydroxylase is encoded by the TH gene, and the enzyme is present in the central nervous system (CNS), peripheral sympathetic neurons and the adrenal medulla. Tyrosine hydroxylase, phenylalanine hydroxylase and tryptophan hydroxylase together make up the family of aromatic amino acid hydroxylases (AAAHs).