

## Anti-Tyrosine Hydroxylase/TH Antibody Picoband™

Catalog Number: PB9449

### About TH

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).

### Overview

Product Name	Anti-Tyrosine Hydroxylase/TH Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Tyrosine Hydroxylase/TH Antibody Picoband™ catalog # PB9449. Tested in IF, IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P07101

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Tyrosine Hydroxylase, identical to the related mouse and rat sequences.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat, By Heat Immunofluorescence, 5ug/ml, Mouse, Rat</p>

## Anti-Tyrosine Hydroxylase/TH Antibody Picoband™ (PB9449) Images

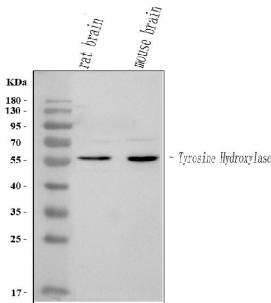


Figure 1. Western blot analysis of Tyrosine Hydroxylase/TH using anti-Tyrosine Hydroxylase/TH antibody (PB9449). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: rat brain tissue lysates,  
Lane 2: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Tyrosine Hydroxylase/TH antigen affinity purified polyclonal antibody (Catalog # PB9449) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Tyrosine Hydroxylase/TH at approximately 59 kDa. The expected band size for Tyrosine Hydroxylase/TH is at 59 kDa.

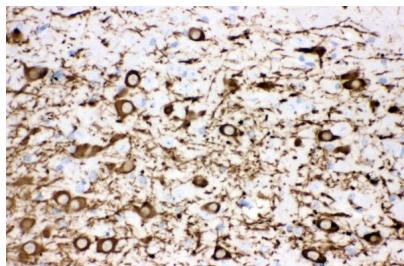


Figure 2. IHC analysis of Tyrosine Hydroxylase/TH using anti-Tyrosine Hydroxylase/TH antibody (PB9449). Tyrosine Hydroxylase/TH was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Tyrosine Hydroxylase/TH Antibody (PB9449) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

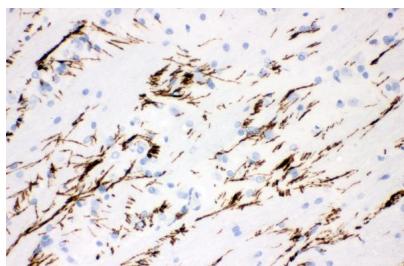
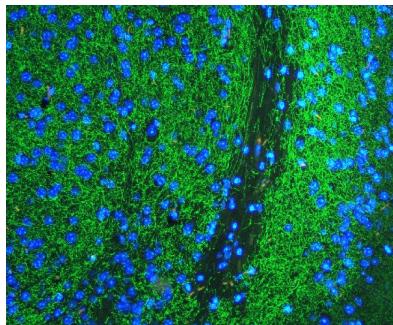


Figure 3. IHC analysis of Tyrosine Hydroxylase/TH using anti-Tyrosine Hydroxylase/TH antibody (PB9449). Tyrosine Hydroxylase/TH was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Tyrosine Hydroxylase/TH Antibody (PB9449) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 4. IF analysis of Tyrosine Hydroxylase/TH using anti-



Tyrosine Hydroxylase/TH antibody (PB9449). Tyrosine Hydroxylase/TH was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-Tyrosine Hydroxylase/TH Antibody (PB9449) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

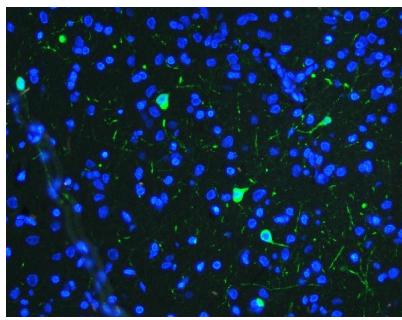


Figure 5. IF analysis of Tyrosine Hydroxylase/TH using antiTyrosine Hydroxylase/TH antibody (PB9449). Tyrosine Hydroxylase/TH was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-Tyrosine Hydroxylase/TH Antibody (PB9449) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

## 23 Publications Citing This Product

1. PubMed ID: 10.3389/fimmu.2021.714244, PAC1 Receptor Mediates Electroacupuncture-Induced Neuro and Immune Protection During Cisplatin Chemotherapy
2. PubMed ID: 10.14336/AD.2020.0827, Age-Related Cognitive and Motor Decline in a Mouse Model of CDKL5 Deficiency Disorder is Associated with Increased Neuronal Senescence and Death
3. PubMed ID: 10.1186/s12872-016-0375-3, Autonomic remodeling may be responsible for decreased incidence of aortic dissection in STZ-induced diabetic rats via down-regulation of matrix metalloprotease 2

Visit [bosterbio.com/anti-tyrosine-hydroxylase-picoband-trade antibody-pb9449-boster.html](http://bosterbio.com/anti-tyrosine-hydroxylase-picoband-trade antibody-pb9449-boster.html) to see all 23 publications.

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