

## Product datasheet

# Anti-Tyrosine Hydroxylase antibody [EP1532Y] ab137869

Recombinant RabMAb

★★★★★ 8 Abreviews 12 References 12 Images

### Overview

<b>Product name</b>	Anti-Tyrosine Hydroxylase antibody [EP1532Y]
<b>Description</b>	Rabbit monoclonal [EP1532Y] to Tyrosine Hydroxylase
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, Flow Cyt, IHC-P, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Pig
<b>Immunogen</b>	Synthetic peptide within Human Tyrosine Hydroxylase aa 500 to the C-terminus (C terminal). The exact sequence is proprietary.
<b>Positive control</b>	PC12 cell lysate; Rat glial tumor cell line; Rat cerebral cortex; Mouse cerebral cortex; SH-SY5Y.
<b>General notes</b>	<p>The human recommendation is based on the WB result. This antibody may not be suitable for IHC with human samples.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p><b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</b></p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and</p>

species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP1532Y
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab137869** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	1/5000. Predicted molecular weight: 58 kDa. <b>For unpurified use at 1/10000 - 1/50000.</b>
Flow Cyt		1/50. <b>For unpurified use at 1/1000.</b> <a href="#">ab172730</a> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-P	★★★★★	1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See <a href="#">IHC antigen retrieval protocol</a> .
ICC/IF		1/100 - 1/250.

## Target

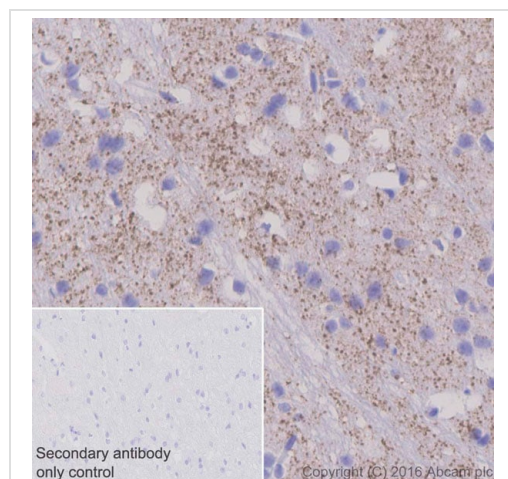
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<b>Function</b>	Plays an important role in the physiology of adrenergic neurons.
<b>Tissue specificity</b>	Mainly expressed in the brain and adrenal glands.
<b>Pathway</b>	Catecholamine biosynthesis; dopamine biosynthesis; dopamine from L-tyrosine: step 1/2.
<b>Involvement in disease</b>	Defects in TH are the cause of dystonia DOPA-responsive autosomal recessive (ARDRD) [MIM:605407]; also known as autosomal recessive Segawa syndrome. ARDRD is a form of DOPA-responsive dystonia presenting in infancy or early childhood. Dystonia is defined by the presence of sustained involuntary muscle contractions, often leading to abnormal postures. Some cases of ARDRD present with parkinsonian symptoms in infancy. Unlike all other forms of dystonia, it is an eminently treatable condition, due to a favorable response to L-DOPA. Note=May play a role in the pathogenesis of Parkinson disease (PD). A genome-wide copy number variation analysis has identified a 34 kilobase deletion over the TH gene in a PD patient but not in any controls.
<b>Sequence similarities</b>	Belongs to the bipterin-dependent aromatic amino acid hydroxylase family.

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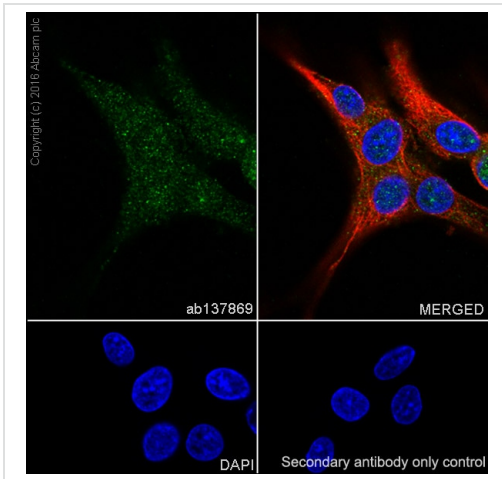
## Images

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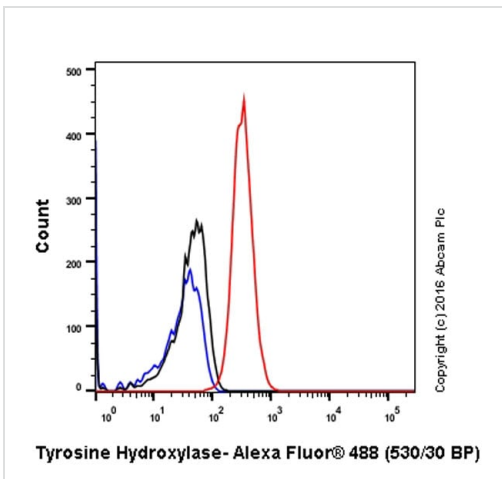
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat cerebral cortex tissue sections labeling Tyrosine Hydroxylase with Purified ab137869 at 1:500 dilution (1.1 µg/ml). Heat mediated antigen retrieval was performed using Perform heat mediated antigen retrieval using citrate Buffer, PH6. Tissue was counterstained with Hematoxylin. [ab97051](#) Goat Anti-Rabbit IgG H&L (HRP) secondary antibody was used at 1:500 dilution. PBS instead of the primary antibody was used as the negative control.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)



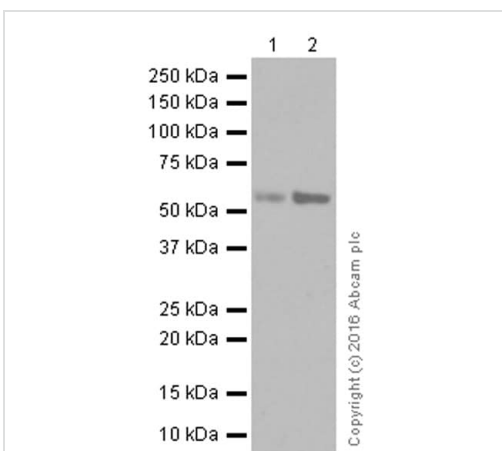
Immunocytochemistry/ Immunofluorescence - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Immunocytochemistry/ Immunofluorescence analysis of C6 (Rat glial tumor cell line) cells labeling Tyrosine Hydroxylase with Purified ab137869 at 1:100 dilution (5.6µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma cell line from bone marrow) cells labeling Tyrosine Hydroxylase with purified ab137869 at 1:50 dilution (10 ug/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

**All lanes** : Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869) at 0.03 µg/ml (purified)

**Lane 1** : Mouse brain lysate

**Lane 2** : Rat brain lysate

Lysates/proteins at 20 µg per lane.

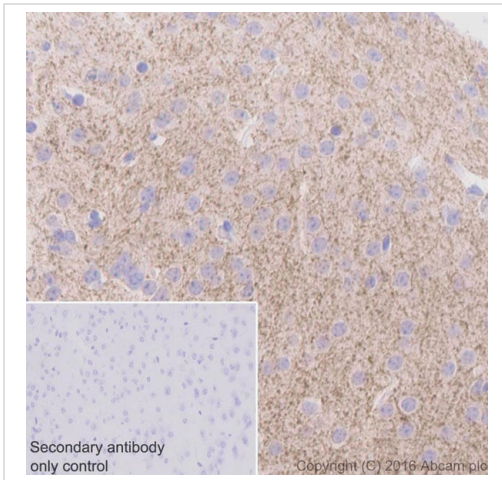
**Secondary**

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 58 kDa

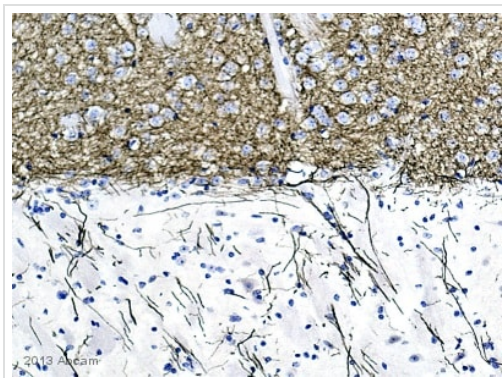
**Observed band size:** 58 kDa

Blocking and diluting buffer: 5% NFDm/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse cerebral cortex tissue sections labeling Tyrosine Hydroxylase with Purified ab137869 at 1:500 dilution (1.1 µg/ml). Heat mediated antigen retrieval was performed using Perform heat mediated antigen retrieval using citrate Buffer, PH6. Tissue was counterstained with Hematoxylin. [ab97051](#) Goat Anti-Rabbit IgG H&L (HRP) secondary antibody was used at 1:500 dilution. PBS instead of the primary antibody was used as the negative control.

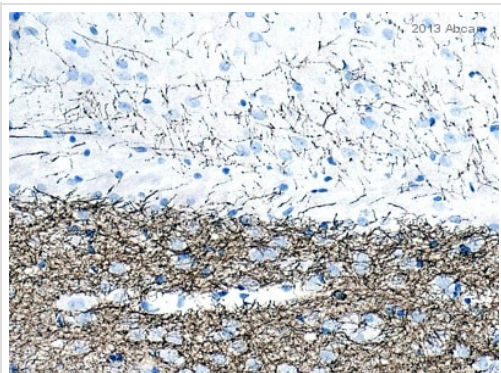
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)



ab137869 staining Tyrosine Hydroxylase in mouse brain tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer. Samples were then blocked with 1% B.S.A. for 10 minutes at 21°C followed by incubation with the primary antibody for 2 hours at 1/800. A biotin-conjugated goat anti-rabbit polyclonal was used as secondary antibody at a 1/250 dilution.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

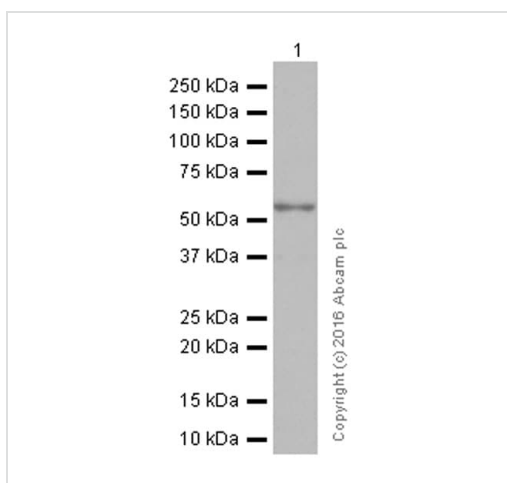
Image courtesy of Carl Hobbs, Kings College London, U.K.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Image courtesy of Carl Hobbs, Kings College London, U.K.

ab137869 staining Tyrosine Hydroxylase in rat brain tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer. Samples were then blocked with 1% B.S.A. for 10 minutes at 21°C followed by incubation with the primary antibody for 2 hours at 1/1000. A biotin-conjugated goat anti-rabbit polyclonal was used as secondary antibody at a 1/250 dilution.



Western blot - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869) at 0.1 µg/ml (purified) + Human adrenal gland lysate at 20 µg

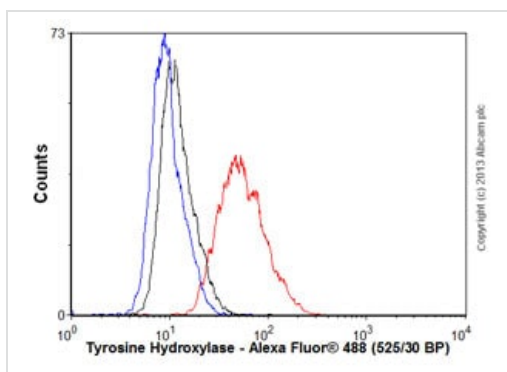
### Secondary

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 58 kDa

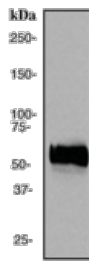
**Observed band size:** 58 kDa

Blocking and diluting buffer : 5% NFDM/TBST



Flow Cytometry - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Overlay histogram showing SHSY-5Y cells stained with ab137869 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab137869, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1 µg/1x10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SHSY-5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



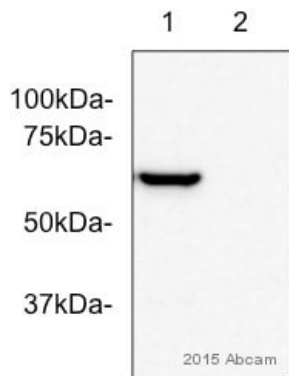
Western blot - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869) at 1/100000 dilution (unpurified) + PC12 cell lysate at 10 µg

**Secondary**

Goat anti-rabbit HRP at 1/2000 dilution

**Predicted band size:** 58 kDa



Western blot - Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869)

This image is courtesy of an Abreview submitted by Andre Antunes

**All lanes :** Anti-Tyrosine Hydroxylase antibody [EP1532Y] (ab137869) at 1/5000 dilution (unpurified)

**Lane 1 :** SH-SY5Y cell lysate - transduced with AAV vector expressing human TH

**Lane 2 :** SH-SY5Y cell lysate - non-infected

Lysates/proteins at 20000 cells per lane.

**Secondary**

**All lanes :** HRP-conjugated goat anti-rabbit IgG at 1/10000 dilution

Developed using the ECL technique.

Performed under non-reducing conditions.

**Predicted band size:** 58 kDa

**Observed band size:** 58 kDa

**Exposure time:** 1 second

Blocked with 5% milk for 1 hour at 25°C.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Tyrosine Hydroxylase antibody [EP1532Y]  
(ab137869)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Response to your inquiry within 24 hours
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- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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