abcam

## Product datasheet

# Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free ab220218

Recombinant RabMAb

8 Images

### Overview

| | |
|---|---|
| **Product name** | Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free |
| **Description** | Rabbit monoclonal [EP1532Y] to Tyrosine Hydroxylase - BSA and Azide free |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt, WB, IHC-P, ICC/IF |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human<br>**Predicted to work with:** Pig |
| **Immunogen** | Synthetic peptide from the C-terminal region of Human Tyrosine Hydroxylase. |
| **Positive control** | PC12 cell lysate. |
| **General notes** | ab220218 is the carrier-free version of ab137869. This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.<br>Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.<br>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.<br>ab220218 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.<br>*Maxpar® is a trademark of Fluidigm Canada Inc.*<br>This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information see here.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.<br>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.<br>Abcam is leading the way with our range of recombinant antibodies, knockout-validated |

antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and 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

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| **Storage buffer** | pH: 7.2<br>Constituent: PBS |
| **Carrier free** | Yes |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EP1532Y |
| **Isotype** | IgG |

## Applications

Our Abpromise guarantee covers the use of **ab220218** in the following tested applications.

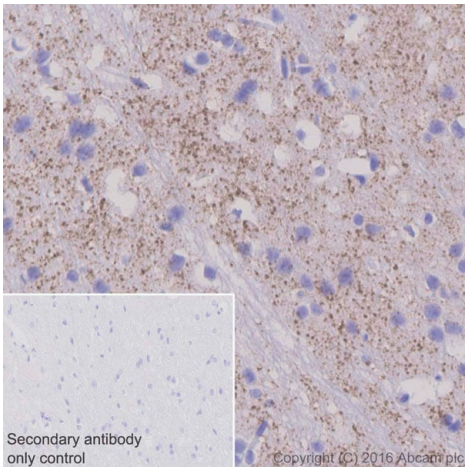
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| Flow Cyt | | Use at an assay dependent concentration.<br>ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| WB | | Use at an assay dependent concentration. Predicted molecular weight: 58 kDa. |
| IHC-P | | Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.<br>See IHC antigen retrieval protocol. |
| ICC/IF | | Use at an assay dependent concentration. |

## Target

| | |
|---|---|
| **Function** | Plays an important role in the physiology of adrenergic neurons. |
| **Tissue specificity** | Mainly expressed in the brain and adrenal glands. |
| **Pathway** | Catecholamine biosynthesis; dopamine biosynthesis; dopamine from L-tyrosine: step 1/2. |
| **Involvement in disease** | 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. |
| **Sequence similarities** | Belongs to the biopterin-dependent aromatic amino acid hydroxylase family. |

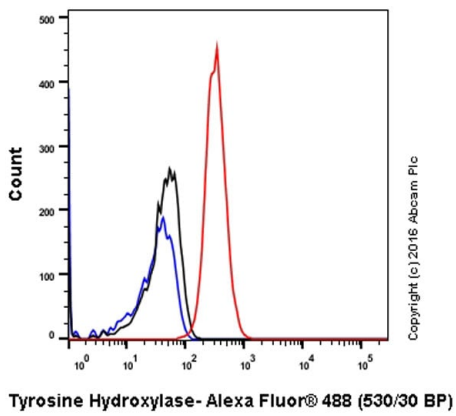
## Images




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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.

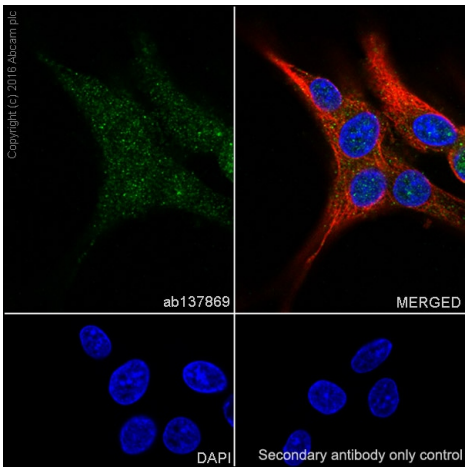
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab137869).




Flow Cytometry - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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).

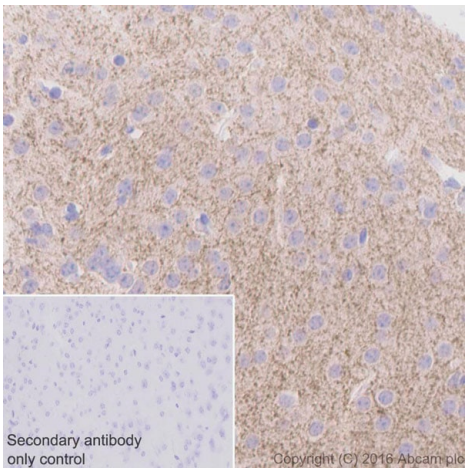
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab137869).




Immunocytochemistry/ Immunofluorescence - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab137869).




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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.

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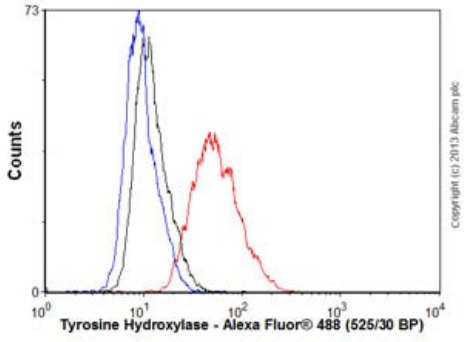
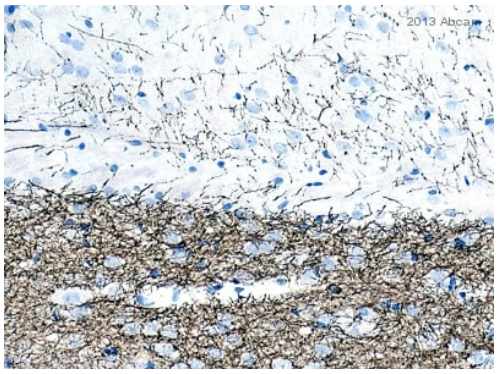



Flow Cytometry - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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) (0.1µg/1x$10^6$ 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab137869).

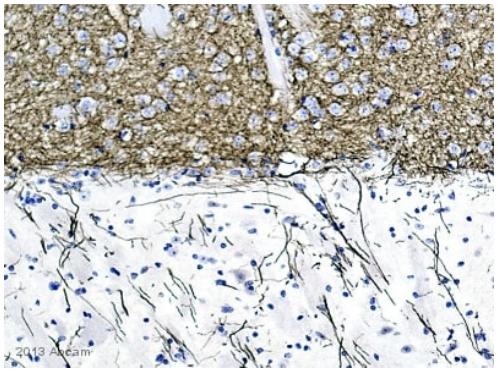



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

This image is courtesy of an Abreview submitted by 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 21ºC 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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab137869).

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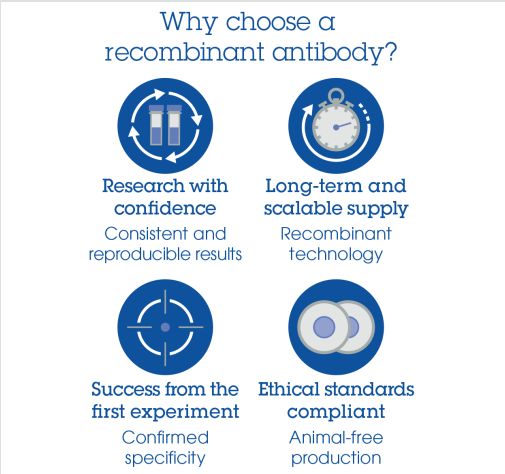


Anti-Tyrosine Hydroxylase antibody [EP1532Y] - BSA and Azide free (ab220218)

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