abcam

Product datasheet

Anti-PHOX2B antibody [EPR14423] - BSA and Azide free ab216456

Recombinant RabMAb

1 References 5 Images

Overview

Product name	Anti-PHOX2B antibody [EPR14423] - BSA and Azide free
Description	Rabbit monoclonal [EPR14423] to PHOX2B - BSA and Azide free
Host species	Rabbit
Specificity	The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse.
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Neuro-2a and SH-SY5Y cell lysate. IHC-P: Human neuroblastoma tissue. ICC/IF: HeLa, Neuro-2a and SH-SY5Y cells.
General notes	ab216456 is the carrier-free version of **ab183741**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. 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. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14423
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab216456 in the following tested applications.

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

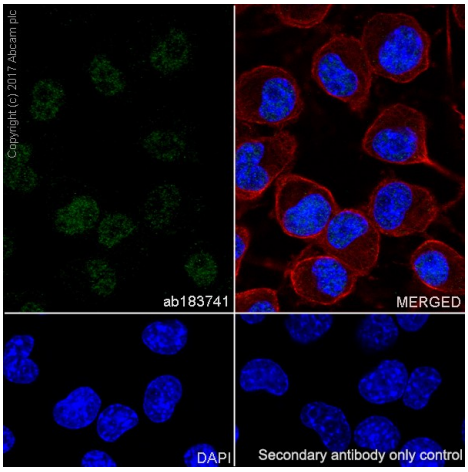
Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 35 kDa (predicted molecular weight: 32 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	Involved in the development of several major noradrenergic neuron populations, including the locus coeruleus. Transcription factor which could determine a neurotransmitter phenotype in vertebrates. Enhances second-messenger-mediated activation of the dopamine beta-hydrolase and c-fos promoters, and of several enhancers including cAMP-response element and serum-response element.
Tissue specificity	Expressed in neuroblastoma, brain and adrenal gland.
Involvement in disease	Defects in PHOX2B are a cause of congenital central hypoventilation syndrome (CCHS) [MIM:209880]; also known as congenital failure of autonomic control or Ondine curse. Most mutations consist of 5-10 alanine expansions in the poly-Ala region from amino acids 241-260. CCHS is a rare disorder characterized by abnormal control of respiration in the absence of neuromuscular or lung disease, or an identifiable brain stem lesion. A deficiency in autonomic control of respiration results in inadequate or negligible ventilatory and arousal responses to hypercapnia and hypoxemia. CCHS is frequently complicated with neurocristopathies such as Hirschsprung disease that occurs in about 16% of CCHS cases.

	Defects in PHOX2B are the cause of susceptibility to neuroblastoma type 2 (NBLST2) [MIM:613013]. A common neoplasm of early childhood arising from embryonic cells that form the primitive neural crest and give rise to the adrenal medulla and the sympathetic nervous system.
Sequence similarities	Belongs to the paired homeobox family. Contains 1 homeobox DNA-binding domain.
Cellular localization	Nucleus.

Images



Immunocytochemistry/ Immunofluorescence - Anti-PHOX2B antibody [EPR14423] - BSA and Azide free (ab216456)

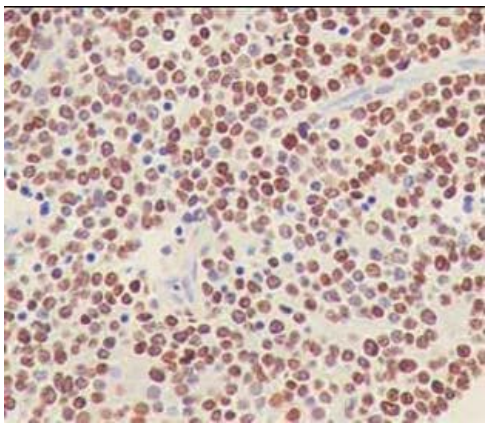
This data was developed using **ab183741**, the same clone but in a different formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cell line labelling PHOX2B with **ab183741** at 1/100 (10 µg/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green).

Confocal image showing nuclear staining in Neuro-2a cell line.

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

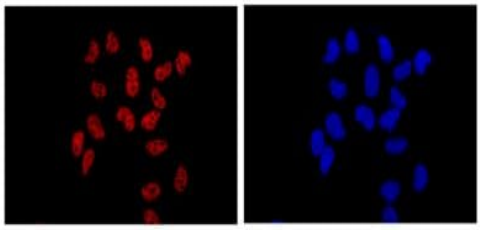


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHOX2B antibody [EPR14423] - BSA and Azide free (ab216456)

This data was developed using **ab183741**, the same clone but in a different formulation.

Immunohistochemical analysis of paraffin-embedded human neuroblastoma tissue labeling PHOX2B with **ab183741** at 1/1000 dilution. The slide is counterstained with Hematoxylin.

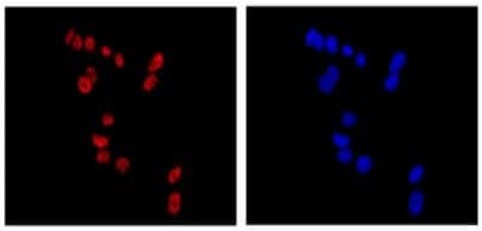
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-PHOX2B antibody [EPR14423] - BSA and Azide free (ab216456)

This data was developed using **ab183741**, the same clone but in a different formulation.

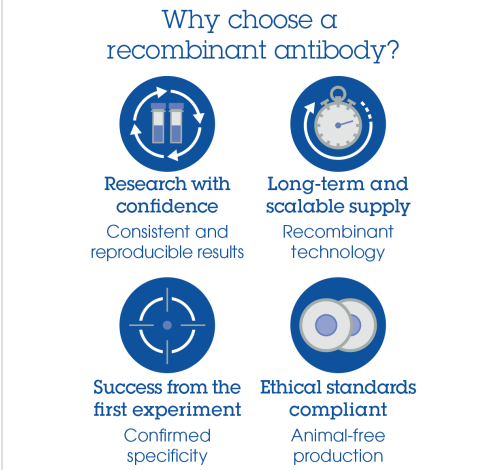
Immunofluorescence analysis of acetone-fixed HeLa cells labeling PHOX2B with **ab183741** at 1/100 dilution (red). Goat anti-rabbit IgG (Alexa Fluor® 555) at 1/200 dilution was used as the secondary antibody. The slide on the right is stained with Dapi (blue).



Immunocytochemistry/ Immunofluorescence - Anti-PHOX2B antibody [EPR14423] - BSA and Azide free (ab216456)

This data was developed using **ab183741**, the same clone but in a different formulation.

Immunofluorescence analysis of 4% paraformaldehyde-fixed SH-SY5Y cells labeling PHOX2B with **ab183741** at 1/100 dilution (red). Goat anti-rabbit IgG (Alexa Fluor® 555) at 1/200 dilution was used as the secondary antibody. The slide on the right is stained with Dapi (blue).



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