10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PHOX2B Antibody

Catalog # ASC11501

Product Information

Application	WB, E
Primary Accession	Q99453
Other Accession	NP_003915, 12707580
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	31621
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PHOX2B antibody can be used for detection of PHOX2B by Western blot at 1 - 2 □g/mL.

Additional Information

Gene ID	8929
Other Names	Paired mesoderm homeobox protein 2B, Neuroblastoma Phox, NBPhox, PHOX2B homeodomain protein, Paired-like homeobox 2B, PHOX2B, PMX2B
Target/Specificity	PHOX2B; PHOX2B antibody is predicted to not cross-react with other paired homeobox family members.
Reconstitution & Storage	PHOX2B antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	PHOX2B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PHOX2B
Synonyms	PMX2B
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.

Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108}.
Tissue Location	Expressed in neuroblastoma, brain and adrenal gland

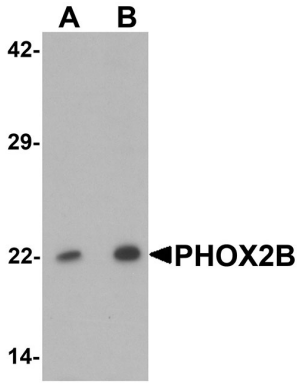
Background

PHOX2B Antibody: PHOX2A and PHOX2B (Paired mesoderm homeobox protein) are closely related, paired-homeodomain transcription factors that function as determinants of the noradrenergic phenotype during embryogenesis. PHOX2 proteins are crucial for the regulation of endogenous hydroxylases in neural crest cells and promote sympathetic neuron generation. Human PHOX2B contains one DNA binding homeobox domain and is required for the differentiation of all central and nonperipheral noradrenergic centers in the brain. In contrast, PHOX2A controls only the differentiation of the main noradrenergic center of the brain. Regulation of PHOX2 may have therapeutic utility in aging or disorders involving degeneration of noradrenergic neurons.

References

Stanke M, Junghans D, Geissen M, et al. The Phox2 homeodomain proteins are sufficient to promote the development of sympathetic neurons. Development 1999; 126:4087-94
Young HM, Ciampoli D, Hsuan J, et al. Expression of Ret-, p75(NTR)-, Phox2a-, Phox2b-, and tyrosine hydroxalase-immunoreactivity by undifferentiated neural crest-derived cells and different classes of enteric neurons in the embryonic mouse gut. Dev. Dyn. 1999; 216:137-52.
Pattyn A, Morin X, Cremer H, et al. The homeobox gene Phox2b is essential for the development of autonomic neural crest derivatives. Nature 1999; 399:366-70.
Coppola E, d'Autréaux F, Rijli FM, et al. Ongoing roles of Phox2 homeodomain transcription factors during neuronal differentiation. Development 2010; 137:4211-20

Images



Western blot analysis of PHOX2B in 293 cell lysate with PHOX2B antibody at (A) 1 and (B) 2 µg/mL.