

**PHOX2A Antibody (monoclonal) (M01)****Mouse monoclonal antibody raised against a partial recombinant PHOX2A.****Catalog # AT3303a****Specification**

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**PHOX2A Antibody (monoclonal) (M01) - Product Information**

Application	WB, IF
Primary Accession	<a href="#">O14813</a>
Other Accession	<a href="#">NM_005169</a>
Reactivity	Human, Rat
Host	mouse
Clonality	Monoclonal
Isotype	IgG2a Kappa
Calculated MW	29653

**PHOX2A Antibody (monoclonal) (M01) - Additional Information****Gene ID** 401**Other Names**

Paired mesoderm homeobox protein 2A, ARIX1 homeodomain protein, Aristaless homeobox protein homolog, Paired-like homeobox 2A, PHOX2A, ARIX, PMX2A

**Target/Specificity**

PHOX2A (NP\_005160, 1 a.a. ~ 90 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 kDa.

**Dilution**

WB~~1:500~1000

IF~~1:50~200

**Format**

Clear, colorless solution in phosphate buffered saline, pH 7.2 .

**Storage**

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

**Precautions**

PHOX2A Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

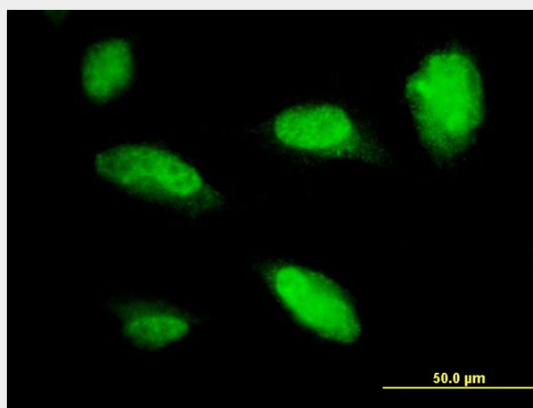
**PHOX2A Antibody (monoclonal) (M01) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

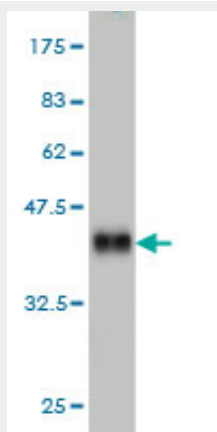
- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

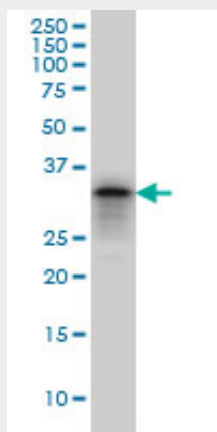
### PHOX2A Antibody (monoclonal) (M01) - Images



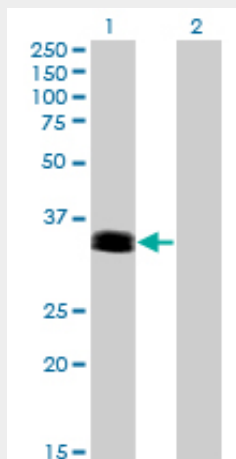
Immunofluorescence of monoclonal antibody to PHOX2A on HeLa cell. [antibody concentration 10 ug/ml]



Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (35.64 KDa) .



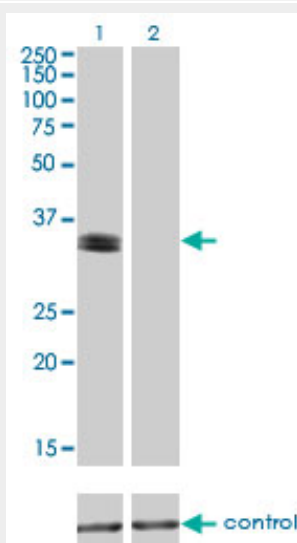
PHOX2A monoclonal antibody (M01), clone 4F6 Western Blot analysis of PHOX2A expression in PC-12 ( (Cat # AT3303a )



Western Blot analysis of PHOX2A expression in transfected 293T cell line by PHOX2A monoclonal antibody (M01), clone 4F6.

Lane 1: PHOX2A transfected lysate(29.7 KDa).

Lane 2: Non-transfected lysate.



Western blot analysis of PHOX2A over-expressed 293 cell line, cotransfected with PHOX2A Validated Chimera RNAi ( (Cat # AT3303a )

### PHOX2A Antibody (monoclonal) (M01) - Background

The protein encoded by this gene contains a paired-like homeodomain most similar to that of the *Drosophila aristaless* gene product. The encoded protein plays a central role in development of the autonomic nervous system. It regulates the expression of tyrosine hydroxylase and dopamine beta-hydroxylase, two catecholaminergic biosynthetic enzymes essential for the differentiation and maintenance of the noradrenergic neurotransmitter phenotype. The encoded protein has also been shown to regulate transcription of the alpha3 nicotinic acetylcholine receptor gene. Mutations in this gene have been associated with autosomal recessive congenital fibrosis of the extraocular muscles.

### PHOX2A Antibody (monoclonal) (M01) - References

Mutations in KIF21A and PHOX2A are absent in 16 patients with congenital vertical incomitant strabismus. Khan AO, et al. Ophthalmic Genet, 2009 Dec. PMID 19852579. Effects of transcription factors Phox2 on expression of norepinephrine transporter and dopamine beta-hydroxylase in SK-N-BE(2)C cells. Fan Y, et al. J Neurochem, 2009 Sep. PMID 19573018. The Phox2 pathway is differentially expressed in neuroblastoma tumors, but no mutations were found in the candidate tumor suppressor gene PHOX2A. Wilz?n A, et al. Int J Oncol, 2009 Mar. PMID 19212675. PHOX2A and PHOX2B genes are highly co-expressed in human neuroblastoma. Longo L, et al. Int J Oncol, 2008 Nov. PMID 18949361. Clinical features, ARIX and PHOX2B nucleotide changes in three families with congenital superior oblique muscle palsy. Imai S, et al. Acta Med Okayama, 2008 Feb. PMID 18323871.