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

# PHOX2A Antibody
**Catalog # ASC11479**

## Specification

### PHOX2A Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC-P, IF, E** |
| Primary Accession | O14813 |
| Other Accession | NP_005160, 46249382 |
| Reactivity | **Human, Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **IgG** |
| Application Notes | **PHOX2A antibody can be used for detection of PHOX2A by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 2.5 µg/mL.** |

### PHOX2A Antibody - Additional Information

Gene ID **401**

**Target/Specificity**
PHOX2A; PHOX2A antibody is predicted to not cross-react with other paired homeobox family members.

**Reconstitution & Storage**
PHOX2A 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**
PHOX2A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### PHOX2A Antibody - Protein Information

**Name** PHOX2A

**Synonyms** ARIX, PMX2A

**Function**
May be involved in regulating the specificity of expression of the catecholamine biosynthetic genes. Acts as a transcription activator/factor. Could maintain the noradrenergic phenotype.

**Cellular Location**
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108}.

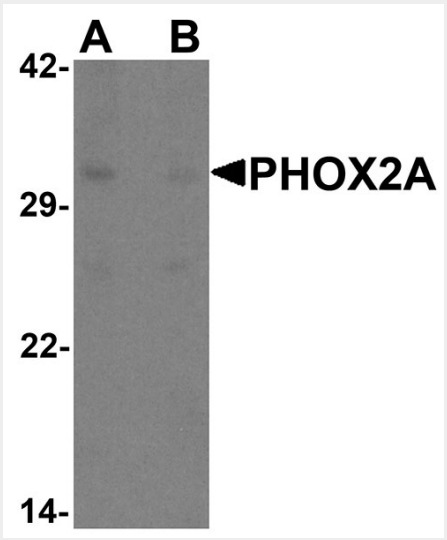
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

## PHOX2A Antibody - Protocols

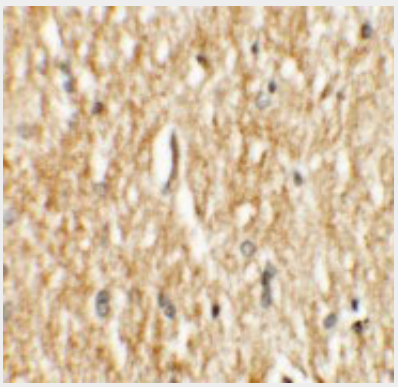
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## PHOX2A Antibody - Images

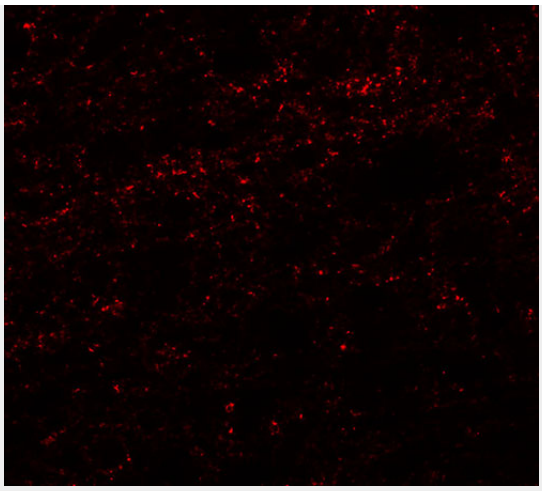



Western blot analysis of PHOX2A in rat brain tissue lysate with PHOX2A antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of PHOX2A in human brain tissue with PHOX2A antibody at 2.5 µg/mL.

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



Immunofluorescence of PHOX2A in human brain tissue with PHOX2A antibody at 20 µg/mL.

**PHOX2A Antibody - Background**

PHOX2A 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.

**PHOX2A Antibody - 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.