

Pitx2 (C-16): sc-8748

BACKGROUND

Pitx1 and Pitx2 are highly homologous, bicoid-related transcription factors. Pitx1 is a bicoid-related homeodomain factor that exhibits preferential expression in the hindlimb, as well as expression in the developing anterior pituitary gland and first branchial arch. Deletion of the Pitx1 locus results in decreased distal expression of the hindlimb-specific marker, the T-box factor (Tbx4). Pitx1 may modulate morphogenesis, growth and patterning of a specific hindlimb region, and serves as a component of the variables that influence morphological and growth distinctions in forelimb and hindlimb identity. Pitx2 was initially identified as the gene responsible for human Rieger syndrome, an autosomal dominant condition that causes developmental abnormalities. Pitx2 is a transcription factor that regulates cardiac positioning and pituitary and tooth morphogenesis. Pitx2 also regulates lung symmetry by encoding "leftness" of the lung. Pitx2 is asymmetrically expressed in the left lateral-plate mesoderm, and mutant mice with laterality defects show altered patterns of Pitx2 expression that correlate with changes in the visceral symmetry. The genes which encode Pitx1 and Pitx2 map to human chromosomes 5q31 and 4q25, respectively.

CHROMOSOMAL LOCATION

Genetic locus: PITX2 (human) mapping to 4q25; Pitx2 (mouse) mapping to 3 G3.

SOURCE

Pitx2 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Pitx2B of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8748 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8748 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pitx2 (C-16) is recommended for detection of Pitx2A, Pitx2B and Pitx2C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Pitx2 (C-16) is also recommended for detection of Pitx2A, Pitx2B and Pitx2C in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Pitx2 siRNA (h): sc-44016, Pitx2 siRNA (m): sc-152281, Pitx2 shRNA Plasmid (h): sc-44016-SH, Pitx2 shRNA Plasmid (m): sc-152281-SH, Pitx2 shRNA (h) Lentiviral Particles: sc-44016-V and Pitx2 shRNA (m) Lentiviral Particles: sc-152281-V.

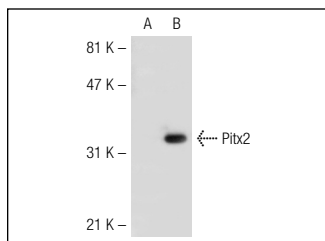
Pitx2 (C-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pitx2: 32 kDa.

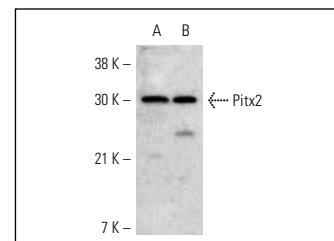
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Pitx2 (C-16): sc-8748. Western blot analysis of Pitx2 expression in non-transfected: sc-117752 (A) and human Pitx2 transfected: sc-111686 (B) 293T whole cell lysates.



Pitx2 (C-16): sc-8748. Western blot analysis of Pitx2 expression in NIH/3T3 (A) and Y79 (B) nuclear extracts.

SELECT PRODUCT CITATIONS

- Schubert, S.W., et al. 2004. Interaction, cooperative promoter modulation and renal colocalization of GCMa and Pitx2. *J. Biol. Chem.* 279: 50358-50365.
- Rulifson, I.C., et al. 2007. Wnt signaling regulates pancreatic β cell proliferation. *Proc. Natl. Acad. Sci. USA* 104: 6247-6252.
- Gage, P.J., et al. 2008. The canonical Wnt signaling antagonist DKK2 is an essential effector of PITX2 function during normal eye development. *Dev. Biol.* 317: 310-324.
- Shi, G., et al. 2010. Expression of paired-like homeodomain transcription factor 2c (PITX2c) in epidermal keratinocytes. *Exp. Cell Res.* 316: 3263-3271.
- Hilton, T., et al. 2010. Pitx2-dependent occupancy by histone deacetylases is associated with T-box gene regulation in mammalian abdominal tissue. *J. Biol. Chem.* 285: 11129-11142.
- Doi, T., et al. 2011. Altered PITX2 and LEF1 gene expression in the cadmium-induced omphalocele in the chick model. *Pediatr. Surg. Int.* 27: 495-499.
- Zacharias, A.L., et al. 2011. Pitx2 is an upstream activator of extraocular myogenesis and survival. *Dev. Biol.* 349: 395-405.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Pitx2 (H-1): sc-390457**, our highly recommended monoclonal alternative to Pitx2 (C-16).