

Pitx1 (N-15): sc-18922

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: PITX1 (human) mapping to 5q31.1; Pitx1 (mouse) mapping to 13 B1.

SOURCE

Pitx1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Pitx1 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-18922 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-18922 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pitx1 (N-15) is recommended for detection of Pitx1 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). Pitx1 (N-15) is also recommended for detection of Pitx1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Pitx1 siRNA (h): sc-44015, Pitx1 siRNA (m): sc-152280, Pitx1 shRNA Plasmid (h): sc-44015-SH, Pitx1 shRNA Plasmid (m): sc-152280-SH, Pitx1 shRNA (h) Lentiviral Particles: sc-44015-V and Pitx1 shRNA (m) Lentiviral Particles: sc-152280-V.

Pitx1 (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

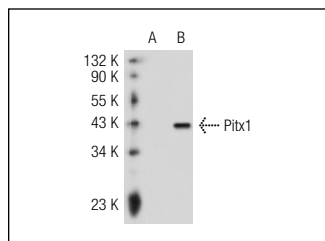
Molecular Weight of Pitx1: 39 kDa.

Positive Controls: Pitx1 (m): 293T Lysate: sc-122598

STORAGE

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

DATA



Pitx1 (N-15): sc-18922. Western blot analysis of Pitx1 expression in non-transfected: sc-117752 (A) and mouse Pitx1 transfected: sc-122598 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kam, K.Y., et al. 2005. Oct-1 and nuclear factor Y bind to the SURG-1 element to direct basal and gonadotropin-releasing hormone (GnRH)-stimulated mouse GnRH receptor gene transcription. *Mol. Endoc.* 19: 148-162.
- Liu, D.X. and Lobie, P.E. 2007. Transcriptional activation of p53 by Pitx1. *Cell Death Differ.* 14: 1893-1907.
- Picard, C., et al. 2007. New emerging role of pitx1 transcription factor in osteoarthritis pathogenesis. *Clin. Orthop. Relat. Res.* 462: 59-66.
- Esibizione, D., et al. 2008. Candidate EDA targets revealed by expression profiling of primary keratinocytes from Tabby mutant mice. *Gene* 427: 42-46.
- Lamba, P., et al. 2008. Paired-like homeodomain transcription factors 1 and 2 regulate follicle-stimulating hormone β -subunit transcription through a conserved *cis*-element. *Endocrinology* 149: 3095-3108.
- Luo, Z., et al. 2010. Pin1 facilitates the phosphorylation-dependent ubiquitination of SF-1 to regulate gonadotropin β -subunit gene transcription. *Mol. Cell. Biol.* 30: 745-763.
- Picard, C., et al. 2013. Nuclear accumulation of prohibitin 1 in osteoarthritic chondrocytes down-regulates PITX1 expression. *Arthritis Rheum.* 65: 993-1003.

RESEARCH USE

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



Try **Pitx1 (G-4): sc-271435**, our highly recommended monoclonal alternative to Pitx1 (N-15).