# IRX3 (M-15): sc-22581

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## BACKGROUND

The Iroquois homeobox gene family of transcription factors regulate aspects of embryonic development including anterior/posterior and dorsal/ventral axis patterning in the central nervous system. The Iroquois family are clustered on two loci, IRXA and IRXB, which map to chromosomes 8 and 13 in mice. The IRXA group includes IRX, IRX2 and IRX4; the IRXB group comprises IRX3, IRX5 and IRX6. IRX1 and IRX2 are both widely expressed during development in the lung epithelium and also in the ventricular septum. IRX1 and IRX2 also play a role in digit formation (E11.5-E14.5). The IRX gene family members are each expressed in a distinct pattern during mouse heart development. Specifically, IRX1 and IRX2 are expressed in the ventricular septum and IRX3 is expressed in the ventricular trabeculated myocardium. In addition, IRX4 is expressed in the linear heart tube and the AV canal; IRX5 is expressed in the endocardium lining the ventricular and atrial myocardium. Furthermore, the IRX4 gene may modulate cardiac development and function. Although the heart of IRX4- mice appears to develop normally, adult IRX4- mice exhibit cardiomyopathy, including cardiac hypertrophy and decreased contractility.

## REFERENCES

1. Christoffels, V.M., et al. 2000. Patterning the embryonic heart: identification of five mouse Iroquois homeobox genes in the developing heart. Dev. Biol. 224: 263-274.

2. Mummenhoff, J., et al. 2001. Expression of IRX6 during mouse morphogenesis. Mech. Dev. 103: 193-195.

3. Becker, M.B., et al. 2001. IRX1 and IRX2 expression in early lung development. Mech. Dev. 106: 155-158.

4. Zulch, A., et al. 2001. Expression pattern of IRX1 and IRX2 during mouse digit development. Mech. Dev. 106: 159-162.

5. Bruneau, B.G., et al. 2001. Cardiomyopathy in IRX4-deficient mice is preceded by abnormal ventricular gene expression. Mol. Cell. Biol. 21: 1730-1736.

6. Ogura, K., et al. 2001. Cloning and chromosome mapping of human and chicken Iroquois (IRX) genes. Cytogenet. Cell Genet. 92: 320-325.

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## CHROMOSOMAL LOCATION

Genetic locus: Irx3 (mouse) mapping to 8 C5.

## SOURCE

IRX3 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IRX3 of mouse origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22581 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22581 X, 200 µg/0.1 ml.

## APPLICATIONS

IRX3 (M-15) is recommended for detection of IRX3 of mouse and rat 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).

Suitable for use as control antibody for IRX3 siRNA (m): sc-38704, IRX3 shRNA Plasmid (m): sc-38704-SH and IRX3 shRNA (m) Lentiviral Particles: sc-38704-V.
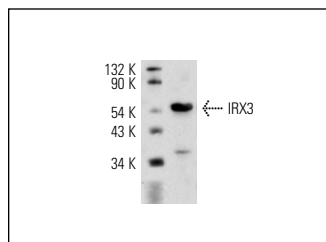
IRX3 (M-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of IRX3: 52 kDa.

Molecular Weight (observed) of IRX3: 61 kDa.

Positive Controls: Sol8 nuclear extract: sc-2157.

## DATA



IRX3 (M-15): sc-22581. Western blot analysis of IRX3 expression in Sol8 nuclear extract.

## SELECT PRODUCT CITATIONS

1. Doi, T., et al. 2011. Expression of Iroquois genes is up-regulated during early lung development in the nitrofen-induced pulmonary hypoplasia. J. Pediatr. Surg. 46: 62-66.

## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.