

IRX5 (H-53): sc-98397

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. The IRXA group includes IRX, IRX2 and IRX4; the IRXB group comprises IRX3, IRX5 and IRX6. 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

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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. Bruneau, B.G., et al. 2001. Cardiomyopathy in IRX4-deficient mice is preceded by abnormal ventricular gene expression. *Mol. Cell. Biol.* 21: 1730-1736.
5. Ogura, K., et al. 2001. Cloning and chromosome mapping of human and chicken Iroquois (IRX) genes. *Cytogenet. Cell Genet.* 92: 320-325.
6. Zulch, A., et al. 2001. Expression pattern of IRX1 and IRX2 during mouse digit development. *Mech. Dev.* 106: 159-162.
7. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606197. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Cheng, C.W., et al. 2005. The Iroquois homeobox gene, *lrx5*, is required for retinal cone bipolar cell development. *Dev. Biol.* 287: 48-60.

CHROMOSOMAL LOCATION

Genetic locus: IRX5 (human) mapping to 16q12.2; *lrx5* (mouse) mapping to 8 C5.

SOURCE

IRX5 (H-53) is a rabbit polyclonal antibody raised against amino acids 432-483 mapping at the C-terminus of IRX5 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-98397 X, 200 µg/0.1 ml.

APPLICATIONS

IRX5 (H-53) is recommended for detection of IRX5 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); non cross-reactive with other IRX family members.

IRX5 (H-53) is also recommended for detection of IRX5 in additional species, including canine and bovine.

Suitable for use as control antibody for IRX5 siRNA (h): sc-93469, IRX5 siRNA (m): sc-146290, IRX5 shRNA Plasmid (h): sc-93469-SH, IRX5 shRNA Plasmid (m): sc-146290-SH, IRX5 shRNA (h) Lentiviral Particles: sc-93469-V and IRX5 shRNA (m) Lentiviral Particles: sc-146290-V.

IRX5 (H-53) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of IRX5: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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.

STORAGE

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

RESEARCH USE

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



Try **IRX5 (IRX5C10G5): sc-81102**, our highly recommended monoclonal alternative to IRX5 (H-53).