

# IRX3 (F-8): sc-166657

## 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<sup>-</sup> mice appears to develop normally, adult IRX4<sup>-</sup> mice exhibit cardiomyopathy, including cardiac hypertrophy and decreased contractility.

## REFERENCES

- 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.
- Mummenhoff, J., et al. 2001. Expression of IRX6 during mouse morphogenesis. *Mech. Dev.* 103: 193-195.
- Becker, M.B., et al. 2001. IRX1 and IRX2 expression in early lung development. *Mech. Dev.* 106: 155-158.
- Zulch, A., et al. 2001. Expression pattern of IRX1 and IRX2 during mouse digit development. *Mech. Dev.* 106: 159-162.
- Bruneau, B.G., et al. 2001. Cardiomyopathy in IRX4-deficient mice is preceded by abnormal ventricular gene expression. *Mol. Cell. Biol.* 21: 1730-1736.

## CHROMOSOMAL LOCATION

Genetic locus: IRX3 (human) mapping to 16q12.2; Irx3 (mouse) mapping to 8 C5.

## SOURCE

IRX3 (F-8) is a mouse monoclonal antibody raised against amino acids 361-507 mapping at the C-terminus of IRX3 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain 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-166657 X, 200 µg/0.1 ml.

## STORAGE

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

## APPLICATIONS

IRX3 (F-8) is recommended for detection of IRX3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (h): sc-106756, IRX3 siRNA (m): sc-38704, IRX3 shRNA Plasmid (h): sc-106756-SH, IRX3 shRNA Plasmid (m): sc-38704-SH, IRX3 shRNA (h) Lentiviral Particles: sc-106756-V and IRX3 shRNA (m) Lentiviral Particles: sc-38704-V.

IRX3 (F-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of IRX3: 52 kDa.

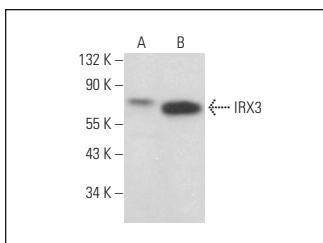
Molecular Weight (observed) of IRX3: 61 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, AT3B-1 whole cell lysate: sc-364372 or IRX3 (h2): 293T Lysate: sc-173324.

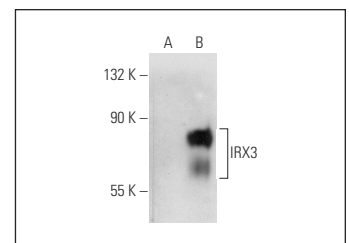
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



IRX3 (F-8): sc-166657. Western blot analysis of IRX3 expression in AT3B-1 (A) and NIH/3T3 (B) whole cell lysates.



IRX3 (F-8): sc-166657. Western blot analysis of IRX3 expression in non-transfected: sc-117752 (A) and human IRX3 transfected: sc-173324 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.