

Xin α (41): sc-136123

BACKGROUND

Xin α , also known as CMYA1 (cardiomyopathy-associated protein 1) or XIRP1 (Xin Actin-binding repeat containing 1), is a 1,843 amino acid protein that functions to protect Actin filaments from depolymerization. Colocalized to the cell junction with Actin stress fibers, Xin α contains 15 Xin repeats and interacts with several proteins including β -catenin, Filamin and VASP (vasodilator-stimulated phosphoprotein). The Xin repeats with the protein are thought to stabilize Actin-based cytoskeletons and may help to crosslink microfilaments with Actin networks. Xin α shares 78% similarity with its mouse counterpart and is expressed in the heart as three alternatively spliced isoforms designated A, B and C. In mice, Xin α is essential for proper heart tube formation and correct cardiac looping, suggesting that the human homolog may have similar functions.

REFERENCES

1. Wang, D.Z., et al. 1999. Requirement of a novel gene, Xin, in cardiac morphogenesis. *Development* 126: 1281-1294.
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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609777. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Pacholsky, D., et al. 2004. Xin repeats define a novel actin-binding motif. *J. Cell Sci.* 117: 5257-5268.
5. Jung-Ching Lin, J., et al. 2005. Structure, expression, and function of a novel intercalated disc protein, Xin. *J. Med. Sci.* 25: 215-222.
6. van der Ven, P.F., et al. 2006. Unusual splicing events result in distinct Xin isoforms that associate differentially with filamin c and Mena/VASP. *Exp. Cell Res.* 312: 2154-2167.
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CHROMOSOMAL LOCATION

Genetic locus: Xirp1 (mouse) mapping to 9 F4.

SOURCE

Xin α (41) is a mouse monoclonal antibody raised against amino acids 3-213 of Xin α of mouse origin.

PRODUCT

Each vial contains 50 μ g IgG1 in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

Xin α (41) is recommended for detection of Xin α of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

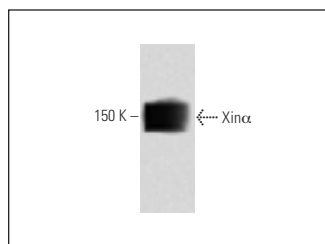
Suitable for use as control antibody for Xin α siRNA (m): sc-63227, Xin α shRNA Plasmid (m): sc-63227-SH and Xin α shRNA (m) Lentiviral Particles: sc-63227-V.

Molecular Weight of Xin α human splice variants: 205/130 kDa.

Molecular Weight of mouse Xin α : 150 kDa.

Positive Controls: mouse neonate whole cell lysate.

DATA



Xin α (41): sc-136123. Western blot analysis of Xin α expression in mouse neonate tissue extract.

RESEARCH USE

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

PROTOCOLS

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