

Xin α (D-8): sc-166658

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. Co-localized 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.

CHROMOSOMAL LOCATION

Genetic locus: XIRP1 (human) mapping to 3p22.2; Xirp1 (mouse) mapping to 9 F4.

SOURCE

Xin α (D-8) is a mouse monoclonal antibody raised against amino acids 735-1034 mapping within an internal region of Xin α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Xin α (D-8) is available conjugated to agarose (sc-166658 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166658 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166658 PE), fluorescein (sc-166658 FITC), Alexa Fluor[®] 488 (sc-166658 AF488), Alexa Fluor[®] 546 (sc-166658 AF546), Alexa Fluor[®] 594 (sc-166658 AF594) or Alexa Fluor[®] 647 (sc-166658 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166658 AF680) or Alexa Fluor[®] 790 (sc-166658 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Xin α (D-8) is recommended for detection of Xin α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 Xin α siRNA (h): sc-63226, Xin α siRNA (m): sc-63227, Xin α shRNA Plasmid (h): sc-63226-SH, Xin α shRNA Plasmid (m): sc-63227-SH, Xin α shRNA (h) Lentiviral Particles: sc-63226-V and Xin α shRNA (m) Lentiviral Particles: sc-63227-V.

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

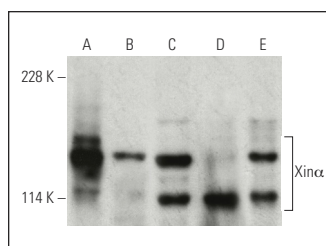
Molecular Weight of mouse Xin α : 150 kDa.

Positive Controls: Hep G2 nuclear extract: sc-364819, Hep G2 cell lysate: sc-2227 or A-10 cell lysate: sc-3806.

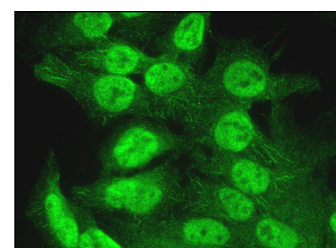
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Xin α (D-8) HRP: sc-166658 HRP. Direct western blot analysis of Xin α expression in A-10 (A), Hep G2 (B), MOLT-4 (C) and Sol8 (D) whole cell lysates and Hep G2 nuclear extract (E).



Xin α (D-8): sc-166658. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane and nuclear localization.

SELECT PRODUCT CITATIONS

- Williams, A.L., et al. 2020. miR-125 family regulates XIRP1 and FIH in response to myocardial infarction. *Physiol. Genomics* 52: 358-368.
- Holt, I., et al. 2020. An interaction of heart disease-associated proteins POPDC1/2 with XIRP1 in transverse tubules and intercalated discs. *BMC Mol. Cell Biol.* 21: 88.
- Li, B., et al. 2021. Cardiac overexpression of XIN prevents dilated cardiomyopathy caused by TNNT2 Δ K210 mutation. *Front. Cell Dev. Biol.* 9: 691749.

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.

PROTOCOLS

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

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