

# DIXDC1 (A-6): sc-377160

## BACKGROUND

DIXDC1 (DIX domain containing 1), also known as CCD1 or Dixin, is a 683 amino acid protein that localizes to the cell junction and to the cytoplasm in an isoform-dependent manner and contains one DIX domain and one CH (calponin-homology) domain. Expressed ubiquitously with highest expression in skeletal and cardiac muscle, DIXDC1 interacts with F-Actin and functions as a positive regulator of the Wnt signaling pathway, effectively targeting the  $\beta$ -catenin-TCF complex for gene expression and mediating Actin dynamics within the cytoskeleton. The gene encoding DIXDC1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

## REFERENCES

1. Katoh, M., et al. 2003. KIAA1735 gene on human chromosome 11q23.1 encodes a novel protein with myosin-tail homologous domain and C-terminal DIX domain. *Int. J. Oncol.* 23: 145-150.
2. Wong, C.K., et al. 2004. The DIX domain protein coiled-coil-DIX1 inhibits c-Jun N-terminal kinase activation by Axin and dishevelled through distinct mechanisms. *J. Biol. Chem.* 279: 39366-39373.
3. Luo, W., et al. 2005. Axin contains three separable domains that confer intramolecular, homodimeric, and heterodimeric interactions involved in distinct functions. *J. Biol. Chem.* 280: 5054-5060.
4. Wang, X., et al. 2006. DIXDC1 isoform, I-DIXDC1, is a novel filamentous Actin-binding protein. *Biochem. Biophys. Res. Commun.* 347: 22-30.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610493. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: DIXDC1 (human) mapping to 11q23.1; Dixdc1 (mouse) mapping to 9 A5.3.

## SOURCE

DIXDC1 (A-6) is a mouse monoclonal antibody raised against amino acids 121-420 mapping within an internal region of DIXDC1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DIXDC1 (A-6) is available conjugated to agarose (sc-377160 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377160 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377160 PE), fluorescein (sc-377160 FITC), Alexa Fluor® 488 (sc-377160 AF488), Alexa Fluor® 546 (sc-377160 AF546), Alexa Fluor® 594 (sc-377160 AF594) or Alexa Fluor® 647 (sc-377160 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377160 AF680) or Alexa Fluor® 790 (sc-377160 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

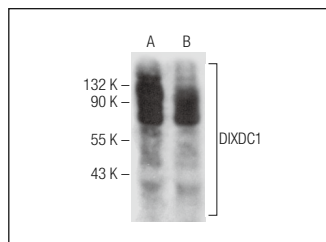
DIXDC1 (A-6) is recommended for detection of DIXDC1 isoforms 1, 2, 3 and 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 DIXDC1 siRNA (h): sc-96677, DIXDC1 siRNA (m): sc-143051, DIXDC1 shRNA Plasmid (h): sc-96677-SH, DIXDC1 shRNA Plasmid (m): sc-143051-SH, DIXDC1 shRNA (h) Lentiviral Particles: sc-96677-V and DIXDC1 shRNA (m) Lentiviral Particles: sc-143051-V.

Molecular Weight of DIXDC1: 77 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810 or mouse skeletal muscle extract: sc-364250.

## DATA



DIXDC1 (A-6): sc-377160. Western blot analysis of DIXDC1 expression in mouse skeletal muscle (A) and rat skeletal muscle (B) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Arnold, J., et al. 2020. miR-488-5p and its role in melanoma. *Exp. Mol. Pathol.* 112: 104348.
2. Kim, Y., et al. 2022. DIX domain containing 1 (DIXDC1) modulates VEGFR2 level in vasculatures to regulate embryonic and postnatal retina angiogenesis. *BMC Biol.* 20: 41.

## 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](http://www.scbt.com) for detailed protocols and support products.

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