

DIXDC1 (N-12): sc-109530

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 β -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 map to chromosome 11.

REFERENCES

1. Katoh, M. and Katoh, M. 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., Luo, W., Deng, Y., Zou, H., Ye, Z. and Lin, S.C. 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., Zou, H., Jin, L., Lin, S., Li, Q., Ye, Z., Rui, H. and Lin, S.C. 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., Zheng, L., Zeng, Z., Zhou, G., Chien, J., Qian, C., Vasmatzis, G., Shridhar, V., Chen, L. and Liu, W. 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/>
6. Shibata, N., Tomimoto, Y., Hanamura, T., Yamamoto, R., Ueda, M., Ueda, Y., Mizuno, N., Ogata, H., Komori, H., Shomura, Y., Kataoka, M., Shimizu, S., Kondo, J., Yamamoto, H., Kikuchi, A. and Higuchi, Y. 2007. Crystallization and preliminary X-ray crystallographic studies of the axin DIX domain. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 63: 529-531.
7. Jing, X.T., Wu, H.T., Wu, Y., Ma, X., Liu, S.H., Wu, Y.R., Ding, X.F., Peng, X.Z., Qiang, B.Q., Yuan, J.G., Fan, W.H. and Fan, M. 2009. DIXDC1 promotes retinoic acid-induced neuronal differentiation and inhibits gliogenesis in P19 cells. *Cell. Mol. Neurobiol.* 29: 55-67.

CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

DIXDC1 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DIXDC1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109530 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DIXDC1 (N-12) is recommended for detection of DIXDC1 isoforms 1 and 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 DIXDC1 isoforms 2 or 3.

DIXDC1 (N-12) is also recommended for detection of DIXDC1 isoforms 1 and 4 in additional species, including avian.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **DIXDC1 (A-6): sc-377160**, our highly recommended monoclonal alternative to DIXDC1 (N-12).