SANTA CRUZ BIOTECHNOLOGY, INC.

CHRDL2 (S-18): sc-70160

BACKGROUND

CHRDL2 (chordin-related protein 2), also known as BNF1 (breast tumor novel factor 1) or CHL2 (chordin-like 2), is a 429 amino acid protein that belongs to the chordin family of proteins. CHRDL2 contains three VWFC (von Willebrand Factor type C) domains and is predominantly expressed in uterus and moderately expressed in prostate, liver, ovary, heart and testis. Due to alternative splicing events, CHRDL2 exists as five isoforms, namely isoform I, isoform II, isoform VII, isoform VIII and isoform IX. Two of these isoforms are secreted, while the other three localize to the cytoplasm. Functioning as a BMP-binding inhibitor, CHRDL2 directly interacts with BMPs and blocks their binding to BMP receptors, thereby inhibiting BMP activity. In breast, lung and colon tumors, CHRDL2 expression is upregulated, suggesting a possible role in tumorigenesis.

REFERENCES

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3. Nakayama, N., et al. 2004. A novel chordin-like BMP inhibitor, CHL2, expressed preferentially in chondrocytes of developing cartilage and osteoarthritic joint cartilage. Development 131: 229-240.
4. Oren, A., et al. 2004. hCHL2, a novel chordin-related gene, displays differential expression and complex alternative splicing in human tissues and during myoblast and osteoblast maturation. Gene 331: 17-31.
5. Zhang, Z. and Henzel, W.J. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. Protein Sci. 13: 2819-2824.
6. Potter, S.S., et al. 2007. Laser capture-microarray analysis of Lim1 mutant kidney development. Genesis 45: 432-439.
7. Zhang, J.L., et al. 2007. von Willebrand factor type C domain-containing proteins regulate bone morphogenetic protein signaling through different recognition mechanisms. J. Biol. Chem. 282: 20002-20014.
8. Wu, Z., et al. 2008. Candidate genes responsible for common and different pathology of infected muscle tissues between *Trichinella spiralis* and *T. pseudospiralis* infection. Parasitol. Int. 57: 368-378.

CHROMOSOMAL LOCATION

Genetic locus: CHRDL2 (human) mapping to 11q13.4.

SOURCE

CHRDL2 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CHRDL2 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-70160 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CHRDL2 (S-18) is recommended for detection of CHRDL2 of human origin by Western Blotting (starting dilution 1:200, 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 CHRDL2 siRNA (h): sc-72891, CHRDL2 shRNA Plasmid (h): sc-72891-SH and CHRDL2 shRNA (h) Lentiviral Particles: sc-72891-V.

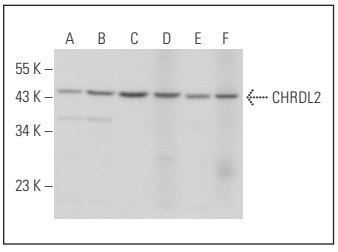
Molecular Weight of CHRDL2: 47 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, ES-2 cell lysate: sc-24674 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CHRDL2 (S-18): sc-70160. Western blot analysis of CHRDL2 expression in DU 145 (**A**), Caki-1 (**B**), U-251-MG (**C**), NTERA-2 cl.D1 (**D**) and ES-2 (**E**) whole cell lysates and human testis tissue extract (**F**).

RESEARCH USE

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