SANTA CRUZ BIOTECHNOLOGY, INC.

CRELD1 (G-13): sc-99364

BACKGROUND

CRELD1 (cysteine-rich with EGF-like domain protein 1) is a 420 amino acid multi-pass transmembrane protein containing 2 EGF-like domains, which are cysteine rich regions that are associated with protein-protein interactions and serve functional roles in cell adhesion proteins, transmembrane receptors and signaling proteins. Analysis of the amino acid sequence of CREDL1 suggests that it may function as a cell adhesion protein. CRELD1 is highly expressed in adult brain, heart, skeletal muscle, fetal liver, kidney and lung. Mutations in the gene encoding CRELD1 may cause susceptibility to atrioventricular septal defect 2, a disease that is characterized by the deficiency of the atrioventricular septum of the heart. Also, loss of heterozygosity in the genetic region encoding CRELD1 is found in lung cancer and nasopharyngeal carcinoma. There are two isoforms of CRELD1 that exist as a result of alternative splicing events.

REFERENCES

1. Rupp, P.A., et al. 2002. Identification, genomic organization and mRNA expression of CRELD1, the founding member of a unique family of matricellular proteins. Gene 293: 47-57.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606217. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Robinson, S.W., et al. 2003. Missense mutations in CRELD1 are associated with cardiac atrioventricular septal defects. Am. J. Hum. Genet. 72: 1047-1052.
4. Maslen, C.L. 2004. Molecular genetics of atrioventricular septal defects. Curr. Opin. Cardiol. 19: 205-210.
5. Sarkozy, A., et al. 2005. CRELD1 and GATA4 gene analysis in patients with nonsyndromic atrioventricular canal defects. Am. J. Med. Genet. A. 139: 236-238.
6. Zatyka, M., et al. 2005. Analysis of CRELD1 as a candidate 3p25 atrioventicular septal defect locus (AVSD2). Clin. Genet. 67: 526-528.
7. Maslen, C.L., et al. 2006. CRELD1 mutations contribute to the occurrence of cardiac atrioventricular septal defects in Down syndrome. Am. J. Med. Genet. A. 140: 2501-2505.
8. Posch, M.G., et al. 2008. Mutations in GATA4, NKX2.5, CRELD1, and BMP4 are infrequently found in patients with congenital cardiac septal defects. Am. J. Med. Genet. A 146A: 251-253.

CHROMOSOMAL LOCATION

Genetic locus: CRELD1 (human) mapping to 3p25.3; Creld1 (mouse) mapping to 6 E3.

SOURCE

CRELD1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CRELD1 of human origin.

RESEARCH USE

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

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-99364 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

VAPPLICATIONS

CRELD1 (G-13) is recommended for detection of CRELD1 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).

CRELD1 (G-13) is also recommended for detection of CRELD1 in additional species, including bovine.

Suitable for use as control antibody for CRELD1 siRNA (h): sc-78142, CRELD1 siRNA (m): sc-142567, CRELD1 shRNA Plasmid (h): sc-78142-SH, CRELD1 shRNA Plasmid (m): sc-142567-SH, CRELD1 shRNA (h) Lentiviral Particles: sc-78142-V and CRELD1 shRNA (m) Lentiviral Particles: sc-142567-V.

Molecular Weight of CRELD1: 45 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.