

CLEC-4F (S-17): sc-242467

BACKGROUND

The C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily consists of a variety of proteins that share a common protein fold and have diverse functions, including cell-cell signaling, cell adhesion, glycoprotein turnover and immune responses. CLEC-4F (C-type lectin domain family 4 member F), also known as CLECSF13 (C-type lectin superfamily member 13) or KCLR, is a 589 amino acid single-pass type II membrane protein that contains one C-type lectin domain and belongs to the CTL/CTLD superfamily. Functioning as a receptor, CLEC-4F has affinity for fucose and galactose, and is thought to have a role in endocytosis. The gene encoding CLEC-4F maps to human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2, including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

REFERENCES

- Patel, S.B., Salen, G., Hidaka, H., Kwiterovich, P.O., Stalenhoef, A.F., Miettinen, T.A., Grundy, S.M., Lee, M.H., Rubenstein, J.S., Polymeropoulos, M.H. and Brownstein, M.J. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. *J. Clin. Invest.* 102: 1041-1044.
- Drickamer, K. 1999. C-type lectin-like domains. *Curr. Opin. Struct. Biol.* 9: 585-590.
- Arce, I., Roda-Navarro, P., Montoya, M.C., Hernanz-Falcón, P., Puig-Kröger, A. and Fernández-Ruiz, E. 2001. Molecular and genomic characterization of human DLEC, a novel member of the C-type lectin receptor gene family preferentially expressed on monocyte-derived dendritic cells. *Eur. J. Immunol.* 31: 2733-2740.
- Hearn, T., Renforth, G.L., Spalluto, C., Hanley, N.A., Piper, K., Brickwood, S., White, C., Connolly, V., Taylor, J.F., Russell-Eggitt, I., Bonneau, D., Walker, M. and Wilson, D.I. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.
- Ebner, S., Sharon, N. and Ben-Tal, N. 2003. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. *Proteins* 53: 44-55.
- Kelsell, D.P., Norgett, E.E., Unsworth, H., Teh, M.T., Cullup, T., Mein, C.A., Dopping-Hepenstal, P.J., Dale, B.A., Tadini, G., Fleckman, P., Stephens, K.G., Sybert, V.P., Mallory, S.B., North, B.V., Witt, D.R., Sprecher, E., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.
- McMahon, S.A., Miller, J.L., Lawton, J.A., Kerkow, D.E., Hodes, A., Marti-Renom, M.A., Doulatov, S., Narayanan, E., Sali, A., Miller, J.F. and Ghosh, P. 2005. The C-type lectin fold as an evolutionary solution for massive sequence variation. *Nat. Struct. Mol. Biol.* 12: 886-892.
- Gijzen, K., Cambi, A., Torensma, R. and Figdor, C.G. 2006. C-type lectins on dendritic cells and their interaction with pathogen-derived and endogenous glycoconjugates. *Curr. Protein Pept. Sci.* 7: 283-294.

CHROMOSOMAL LOCATION

Genetic locus: Clec4f (mouse) mapping to 6 C3.

SOURCE

CLEC-4F (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CLEC-4F of mouse origin.

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-242467 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CLEC-4F (S-17) is recommended for detection of CLEC-4F of mouse and rat 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 CLEC-4F siRNA (m): sc-142389, CLEC-4F shRNA Plasmid (m): sc-142389-SH and CLEC-4F shRNA (m) Lentiviral Particles: sc-142389-V.

Molecular Weight of CLEC-4F: 66 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) 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.

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 or our catalog for detailed protocols and support products.