

CLEC-4E (V-14): sc-161489

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-4E (C-type Lectin domain family 4, member E), also known as Mincle (macrophage-inducible C-type Lectin) or CLECSF9, is a 219 amino acid single-pass type II membrane protein that contains one C-type Lectin domain. Expressed in monocytes, CLEC-4E functions as a downstream target of C/EBP β and is thought to play a role in the inflammatory response, possibly via transcriptional control of C/EBP β . Human CLEC-4E shares 67% sequence identity with its mouse counterpart, suggesting a similar function between species. CLEC-4E exists as multiple alternatively spliced isoforms that are encoded by a gene which maps to a natural killer gene complex region on human chromosome 12.

REFERENCES

- Drickamer, K. 1999. C-type Lectin-like domains. *Curr. Opin. Struct. Biol.* 9: 585-590.
- Matsumoto, M., Tanaka, T., Kaisho, T., Sanjo, H., Copeland, N.G., Gilbert, D.J., Jenkins, N.A. and Akira, S. 1999. A novel LPS-inducible C-type Lectin is a transcriptional target of NF-IL6 in macrophages. *J. Immunol.* 163: 5039-5048.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609962. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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.
- Arce, I., Martínez-Muñoz, L., Roda-Navarro, P. and Fernández-Ruiz, E. 2004. The human C-type Lectin CLECSF8 is a novel monocyte/macrophage endocytic receptor. *Eur. J. Immunol.* 34: 210-220.
- Flornes, L.M., Bryceson, Y.T., Spurkland, A., Lorentzen, J.C., Dissen, E. and Fossum, S. 2004. Identification of Lectin-like receptors expressed by antigen presenting cells and neutrophils and their mapping to a novel gene complex. *Immunogenetics* 56: 506-517.
- Bugaric, A., Hitchens, K., Beckhouse, A.G., Wells, C.A., Ashman, R.B. and Blanchard, H. 2008. Human and mouse macrophage-inducible C-type Lectin (Mincle) bind *Candida albicans*. *Glycobiology* 18: 679-685.
- Wells, C.A., Salvage-Jones, J.A., Li, X., Hitchens, K., Butcher, S., Murray, R.Z., Beckhouse, A.G., Lo, Y.L., Manzanero, S., Cobbold, C., Schroder, K., Ma, B., Orr, S., Stewart, L., Lebus, D., Sobieszczuk, P., Hume, D.A., Stow, J., Blanchard, H. and Ashman, R.B. 2008. The macrophage-inducible C-type Lectin, mincle, is an essential component of the innate immune response to *Candida albicans*. *J. Immunol.* 180: 7404-7413.
- Yamasaki, S., Ishikawa, E., Sakuma, M., Hara, H., Ogata, K. and Saito, T. 2008. Mincle is an ITAM-coupled activating receptor that senses damaged cells. *Nat. Immunol.* 9: 1179-1188.

CHROMOSOMAL LOCATION

Genetic locus: Clec4e (mouse) mapping to 6 F2.

SOURCE

CLEC-4E (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal extracellular domain of CLEC-4E of mouse 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-161489 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CLEC-4E (V-14) is recommended for detection of CLEC-4E of mouse and rat 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 CLEC-4F.

CLEC-4E (V-14) is also recommended for detection of CLEC-4E in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CLEC-4E siRNA (m): sc-142388, CLEC-4E shRNA Plasmid (m): sc-142388-SH and CLEC-4E shRNA (m) Lentiviral Particles: sc-142388-V.

Molecular Weight of CLEC-4E: 35 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.

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.