

CLEC-4E (E-5): sc-390807

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., et al. 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., et al. 2003. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. *Proteins* 53: 44-55.

CHROMOSOMAL LOCATION

Genetic locus: CLEC4E (human) mapping to 12p13.31.

SOURCE

CLEC-4E (E-5) is a mouse monoclonal antibody raised against amino acids 44-89 mapping within an extracellular domain of CLEC-4E of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CLEC-4E (E-5) is available conjugated to agarose (sc-390807 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390807 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390807 PE), fluorescein (sc-390807 FITC), Alexa Fluor[®] 488 (sc-390807 AF488), Alexa Fluor[®] 546 (sc-390807 AF546), Alexa Fluor[®] 594 (sc-390807 AF594) or Alexa Fluor[®] 647 (sc-390807 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390807 AF680) or Alexa Fluor[®] 790 (sc-390807 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

CLEC-4E (E-5) is recommended for detection of CLEC-4E of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-4E siRNA (h): sc-95678, CLEC-4E shRNA Plasmid (h): sc-95678-SH and CLEC-4E shRNA (h) Lentiviral Particles: sc-95678-V.

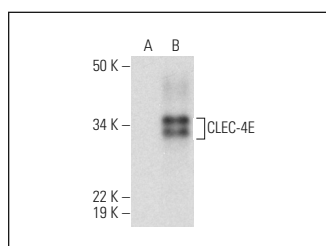
Molecular Weight of CLEC-4E: 35 kDa.

Positive Controls: human CLEC-4E transfected HEK293T whole cell lysate.

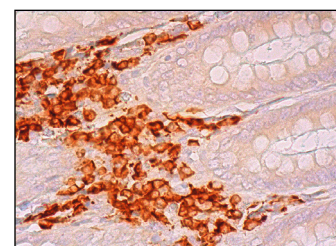
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CLEC-4E (E-5): sc-390807. Western blot analysis of CLEC-4E expression in non-transfected (A) and human CLEC-4E transfected (B) HEK293T whole cell lysates.



CLEC-4E (E-5): sc-390807. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing membrane and cytoplasmic staining of lymphoid cells.

SELECT PRODUCT CITATIONS

- Li, C., et al. 2020. The Mincle/Syk/NF κ B signaling circuit is essential for maintaining the protumoral activities of tumor-associated macrophages. *Cancer Immunol. Res.* 8: 1004-1017.

STORAGE

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