# CD300E (S-17): sc-242394



The Power to Question

#### **BACKGROUND**

CD300E (CD300 antigen-like family member E), also known as CD300LE, CLM2 (CMRF35-like molecule 2), CMRF35A5 or IREM2 (immune receptor expressed on myeloid cells 2), is a 205 amino acid single-pass type I membrane protein that contains one Ig-like V-type (immunoglobulin-like) domain and belongs to the CD300 family. Interacting with DAP12, CD300E most likely functions as an activating receptor. CD300E is present on the surface of mature hematopoietic cells of the monocyte and myeloid lineages. The gene that encodes CD300E consists of approximately 13,872 bases and maps to human chromosome 17q25.1. Comprising over 2.5% of the human genome, chromosome 17 consists of about 81 million bases, encodes over 1,200 genes and has the highest gene density in the genome. Chromosome 17 is also enriched in segmental duplications, ranking third in density among the autosomes.

## **REFERENCES**

- Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
- Piura, B., Rabinovich, A. and Yanai-Inbar, I. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
- 3. Minamoto, T., Buschmann, T., Habelhah, H., Matusevich, E., Tahara, H., Boerresen-Dale, A.L., Harris, C., Sidransky, D. and Ronai, Z. 2001. Distinct pattern of p53 phosphorylation in human tumors. Oncogene 20: 3341-3347.
- Alvarez-Errico, D., Aguilar, H., Kitzig, F., Brckalo, T., Sayoś, J. and Lopez-Botet, M. 2004. IREM-1 is a novel inhibitory receptor expressed by myeloid cells. Eur. J. Immunol. 34: 3690-3701.
- Aguilar, H., Alvarez-Errico, D., Garciá-Montero, A.C., Orfao, A., Sayoś, J. and Lopez-Botet, M. 2004. Molecular characterization of a novel immune receptor restricted to the monocytic lineage. J. Immunol. 173: 6703-6711.
- 6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609801. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Clark, G.J., Ju, X., Azlan, M., Tate, C., Ding, Y. and Hart, D.N. 2009. The CD300 molecules regulate monocyte and dendritic cell functions. Immunobiology 214: 730-736.
- Clark, G.J., Ju, X., Tate, C. and Hart, D.N. 2009. The CD300 family of molecules are evolutionarily significant regulators of leukocyte functions. Trends Immunol. 30: 209-217.
- Brckalo, T., Calzetti, F., Perez-Cabezas, B., Borras, F.E., Cassatella, M.A. and Lopez-Botet, M. 2010. Functional analysis of the CD300e receptor in human monocytes and myeloid dendritic cells. Eur. J. Immunol. 40: 722-732.

#### **CHROMOSOMAL LOCATION**

Genetic locus: CD300E (human) mapping to 17q25.1.

# SOURCE

CD300E (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CD300E of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-242394 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

CD300E (S-17) is recommended for detection of CD300E of 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).

Suitable for use as control antibody for CD300E siRNA (h): sc-94028, CD300E shRNA Plasmid (h): sc-94028-SH and CD300E shRNA (h) Lentiviral Particles: sc-94028-V.

Molecular Weight of CD300E: 23 kDa.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat lgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat lgG-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 lgG-FITC: sc-2024 (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.

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