SANTA CRUZ BIOTECHNOLOGY, INC.

CD300A (h): 293T Lysate: sc-114941

BACKGROUND

CD300A, also known as CMRF35H, IRC1, IRC2, IRp60 or IGSF12, is a 299 amino acid single-pass type I membrane protein that localizes to the cell membrane and contains one Ig-like V-type domain. Expressed by mast cells, B cells, dendritic cells, monocytes, granulocytes and natural killer (NK) cells, CD300A functions as an inhibitory receptor that is thought to help down-regulate the cytolytic activity in NK cells and may also down-regulate the degranulation of mast cells. CD300A exists as multiple alternatively spliced isoforms and is subject to post-translational phosphorylation and glycosylation. The gene encoding CD300A maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Jackson, D.G., Hart, D.N., Starling, G. and Bell, J.I. 1992. Molecular cloning of a novel member of the immunoglobulin gene superfamily homologous to the polymeric immunoglobulin receptor. Eur. J. Immunol. 22: 1157-1163.
2. Green, B.J., Clark, G.J. and Hart, D.N. 1998. The CMRF-35 mAb recognizes a second leukocyte membrane molecule with a domain similar to the poly Ig receptor. Int. Immunol. 10: 891-899.
3. Clark, G.J., Green, B.J. and Hart, D.N. 2000. The CMRF-35H gene structure predicts for an independently expressed member of an ITIM/ITAM pair of molecules localized to human chromosome 17. Tissue Antigens 55: 101-109.
4. Clark, G.J., Fitzpatrick, S., Kuo, B., Modra, C., Jamriska, L. and Hart, D.N. 2002. CMRF-35A, CMRF-35H: potential new CD. J. Biol. Regul. Homeost. Agents 16: 233-235.
5. Bachelet, I., Munitz, A., Moretta, A., Moretta, L. and Levi-Schaffer, F. 2005. The inhibitory receptor IRp60 (CD300a) is expressed and functional on human mast cells. J. Immunol. 175: 7989-7995.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 606790. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Ju, X., Zenke, M., Hart, D.N. and Clark, G.J. 2008. CD300a/c regulate type I interferon and TNF-α secretion by human plasmacytoid dendritic cells stimulated with TLR7 and TLR9 ligands. Blood 112: 1184-1194.
8. Bachelet, I., Munitz, A., Berent-Maoz, B., Mankuta, D. and Levi-Schaffer, F. 2008. Suppression of normal and malignant kit signaling by a bispecific antibody linking kit with CD300a. J. Immunol. 180: 6064-6069.
9. Alvarez, Y., Tang, X., Coligan, J.E. and Borrego, F. 2008. The CD300a (IRp60) inhibitory receptor is rapidly up-regulated on human neutrophils in response to inflammatory stimuli and modulates CD32a (FcγRIIa) mediated signaling. Mol. Immunol. 45: 253-258.

CHROMOSOMAL LOCATION

Genetic locus: CD300A (human) mapping to 17q25.1.

PRODUCT

CD300A (h): 293T Lysate represents a lysate of human CD300A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

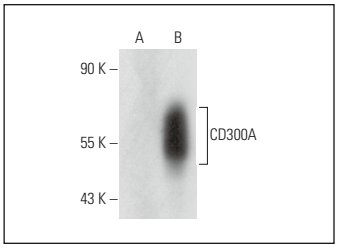
APPLICATIONS

CD300A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CD300A antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CD300A (MEM-260): sc-101318 is recommended as a positive control antibody for Western Blot analysis of enhanced human CD300A expression in CD300A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



CD300A (MEM-260): sc-101318. Western blot analysis of CD300A expression in non-transfected: sc-117752 (**A**) and human CD300A transfected: sc-114941 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.