SANTA CRUZ BIOTECHNOLOGY, INC.

CS1 (h): 293T Lysate: sc-114071

BACKGROUND

CS1, also known as novel Ly9, SLAMF7, 19A24 or CRACC, is a homophilic cell surface receptor. It is a member of the SLAM (signaling lymphocytic activation molecule) family of receptors expressed on natural killer (NK) cells, T cells and stimulated B cells. CS1 contains immunoreceptor tyrosine-based switch motifs in its cytoplasmic domain but, unlike other SLAM receptors, it does not recruit SAP (SLAM-associated protein). In humans, CS1 activates NK cells through an EAT-2-mediated pathway that is SAP-independent. CS1 recruits and associates with EAT-2, a protein closely related to SAP. EAT-2 induces phosphorylation of CS1 which then, upon ligand binding, activates downstream cytotoxicity effectors PLC γ and PI3K. In mice, the EAT-2 association with CS1 has an inhibitory effect on the activation of NK cells.

REFERENCES

1. Cocks, B.G., et al. 1995. A novel receptor involved in T cell activation. Nature 376: 260-263.
2. Aversa, G., et al. 1997. SLAM and its role in T cell activation and Th cell responses. Immunol. Cell Biol. 75: 202-205.
3. Aversa, G., et al. 1997. Engagement of the signaling lymphocytic activation molecule (SLAM) on activated T cells results in IL-2-independent, cyclosporin A-sensitive T cell proliferation and IFN-γ production. J. Immunol. 158: 4036-4044.
4. Favero, J., et al. 1998. Effector pathways regulating T cell activation. Biochem. Pharmacol. 56: 1539-1547.
5. Sayos, J., et al. 1998. The X-linked lymphoproliferative-disease gene product SAP regulates signals induced through the co-receptor SLAM. Nature 395: 462-469.
6. Tovar, V., et al. 2002. Mouse novel Ly9: a new member of the expanding CD150 (SLAM) family of leukocyte cell-surface receptors. Immunogenetics 54: 394-402.
7. Lee, J.K., et al. 2004. Molecular and functional characterization of a CS1 (CRACC) splice variant expressed in human NK cells that does not contain immunoreceptor tyrosine-based switch motifs. Eur. J. Immunol. 34: 2791-2799.
8. Tassi, I. and Colonna, M. 2005. The cytotoxicity receptor CRACC (CS1) recruits EAT-2 and activates the PI3K and phospholipase Cγ signaling pathways in human NK cells. J. Immunol. 175: 7996-8002.
9. Eissmann, P. and Watzl, C. 2006. Molecular analysis of NTB-A signaling: a role for EAT-2 in NTB-A-mediated activation of human NK cells. J. Immunol. 177: 3170-3177.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: SLAMF7 (human) mapping to 1q23.3.

PRODUCT

CS1 (h): 293T Lysate represents a lysate of human CS1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CS1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CS1 antibodies. Recommended use: 10-20 µl per lane.

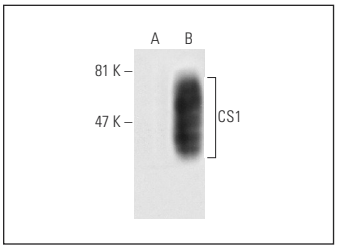
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

CS1 (162.1): sc-53577 is recommended as a positive control antibody for Western Blot analysis of enhanced human CS1 expression in CS1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

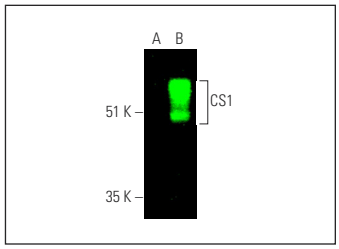
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



CS1 (162.1): sc-53577. Western blot analysis of CS1 expression in non-transfected: sc-117752 (**A**) and human CS1 transfected: sc-114071 (**B**) 293T whole cell lysates.



CS1 (162.1): sc-53577. Near-infrared western blot analysis of CS1 expression in non-transfected: sc-117752 (**A**) and human CS1 transfected: sc-114071 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

RESEARCH USE

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