

CS1 (24.1): sc-53576

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 PI 3-kinase. In mice, the EAT-2 association with CS1 has an inhibitory effect on the activation of NK cells.

REFERENCES

- Cocks, B.G., et al. 1995. A novel receptor involved in T cell activation. *Nature* 376: 260-263.
- Aversa, G., et al. 1997. SLAM and its role in T cell activation and Th cell responses. *Immunol. Cell Biol.* 75: 202-205.
- 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.
- Favero, J., et al. 1998. Effector pathways regulating T cell activation. *Biochem. Pharmacol.* 56: 1539-1547.
- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: SLAMF7 (human) mapping to 1q23.3; Slamf7 (mouse) mapping to 1 H3.

SOURCE

CS1 (24.1) is a mouse monoclonal antibody raised against recombinant CS1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CS1 (24.1) is available conjugated to either phycoerythrin (sc-53576 PE) or fluorescein (sc-53576 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

CS1 (24.1) is recommended for detection of CS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CS1 siRNA (h): sc-45751, CS1 siRNA (m): sc-45752, CS1 shRNA Plasmid (h): sc-45751-SH, CS1 shRNA Plasmid (m): sc-45752-SH, CS1 shRNA (h) Lentiviral Particles: sc-45751-V and CS1 shRNA (m) Lentiviral Particles: sc-45752-V.

Molecular Weight of CS1: 37 kDa.

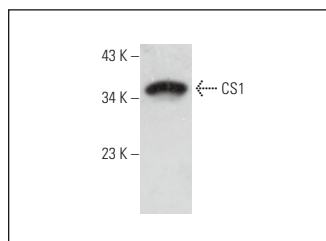
Molecular Weight of glycosylated CS1: 66 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, K-562 whole cell lysate: sc-2203 or NK-92 whole cell lysate: sc-364788.

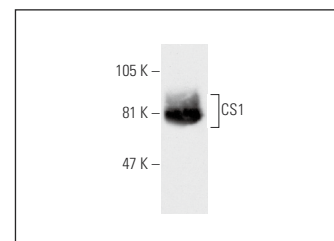
RECOMMENDED SUPPORT REAGENTS

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).

DATA



CS1 (24.1): sc-53576. Western blot analysis of CS1 expression in C6 whole cell lysate.



CS1 (24.1): sc-53576. Western blot analysis of CS1 expression in NK-92 whole cell lysate.

SELECT PRODUCT CITATIONS

- Xie, Z., et al. 2013. Plasma membrane proteomics identifies biomarkers associated with MMSET overexpression in T(4;14) multiple myeloma. *Oncotarget* 4: 1008-1018.
- Choe, U., et al. 2023. Identification and elucidation of cross talk between SLAM family member 7 (SLAMF7) and Toll-like receptor (TLR) pathways in monocytes and macrophages. *Sci. Rep.* 13: 11007.

RESEARCH USE

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



See **CS1 (162.1): sc-53577** for CS1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.