

CS1 (E-7): sc-390840

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

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.

CHROMOSOMAL LOCATION

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

SOURCE

CS1 (E-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CS1 of human origin.

PRODUCT

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

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.

APPLICATIONS

CS1 (E-7) is recommended for detection of CS1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

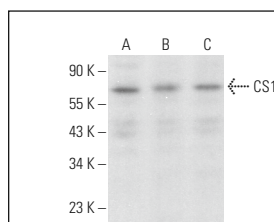
Molecular Weight of glycosylated CS1: 66 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, WEHI-231 whole cell lysate: sc-2213 or NK-92 whole cell lysate: sc-364788.

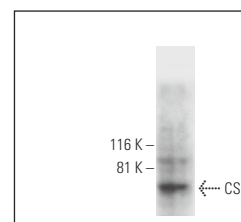
RECOMMENDED SUPPORT REAGENTS

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). 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.

DATA



CS1 (E-7): sc-390840. Western blot analysis of CS1 expression in NTERA-2 cl.D1 (A), WEHI-231 (B) and WR19L (C) whole cell lysates.



CS1 (E-7): sc-390840. Western blot analysis of CS1 expression in NK-92 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, J.E., et al. 2025. Isoxazole-based molecules restore NK cell immune surveillance in hepatocarcinogenesis by targeting TM4SF5 and SLAMF7 linkage. *Signal Transduct. Target. Ther.* 10: 15.



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.