SANTA CRUZ BIOTECHNOLOGY, INC.

# CS1 (C-16): sc-46518

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*The Power to Question*

## 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 phos-phorylation of CS1 which then, upon ligand binding, activates down-stream cytotoxicity effectors PLCγ and PI3K. In mice, the EAT-2 association with CS1 has an inhibitory effect on the activation of NK cells.

## REFERENCES


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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 (CS-1) 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.


## CHROMOSOMAL LOCATION

Genetic locus: SLAMF7 (human) mapping to 1q23.3; Slamf7 (mouse) mapping to 1 H2.

## SOURCE

CS1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CS1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46518 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CS1 (C-16) is recommended for detection of CS1 of mouse and 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 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: K-562 whole cell lysate: sc-2203, NK-92 whole cell lysate: sc-364788 or human PBL whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.