

# CS1 (162.1): sc-53577

## 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  $\gamma$  and PI 3K. In mice, the EAT-2 association with CS1 has an inhibitory effect on the activation of NK cells.

## CHROMOSOMAL LOCATION

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

## SOURCE

CS1 (162.1) is a mouse monoclonal antibody raised against recombinant CS1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CS1 (162.1) is available conjugated to agarose (sc-53577 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53577 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53577 PE), fluorescein (sc-53577 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53577 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53577 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53577 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53577 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53577 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53577 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CS1 (162.1) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> 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.

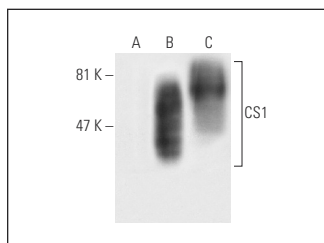
Molecular Weight of glycosylated CS1: 66 kDa.

Positive Controls: CS1 (h): 293T Lysate: sc-114071, NK-92 whole cell lysate: sc-364788 or K-562 whole cell lysate: sc-2203.

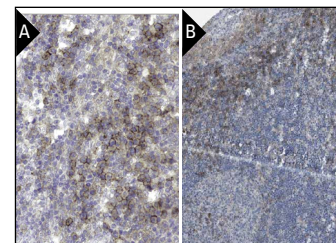
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CS1 (162.1): sc-53577. Western blot analysis of CS1 expression in non-transfected 293T: sc-117752 (A), human CS1 transfected 293T: sc-114071 (B) and NK-92 (C) whole cell lysates.



CS1 (162.1): sc-53577. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of non-follicle cells at low (A) and high (B) magnifications. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## 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.
- Soday, L., et al. 2021. Comparative cell surface proteomic analysis of the primary human T cell and monocyte responses to type I interferon. *Front. Immunol.* 12: 600056.

## 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](http://www.scbt.com) for detailed protocols and support products.

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