Data Sheet (Cat.No.TMPY-01213)

TargetMol

SLAMF7 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	CS1;4930560D03Rik;19A24;19A;CRACC;SLAM family member 7
Protein Construction:	A DNA sequence encoding the mouse SLAMF7 (NP_653122.2) extracellular domain (Met 1-Gly 224) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ser 23
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8BHK6
Molecular Weight:	23.7 kDa (predicted); 35-50 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

SLAM family member 7 (SLAMF7), also known as CRACC, CD319, CD2-like receptor-activating cytotoxic cells, and CS1, is a single-pass type I membrane protein and a member of the CD2 family of cell surface receptors. SLAMF7 is expressed in NK cells, activated B-cells, NK-cell line but not in promyelocytic, B-cell lines, or T-cell lines. Although the cytoplasmic domain of CS1 contains immunoreceptor tyrosine-based switch motifs (ITSM), which enables to recruit signaling lymphocyte activation molecule (SLAM)-associated protein (SAP/SH2D1A), it activates NK cells in

the absence of a functional SAP. CS1 is a self ligand and homophilic interaction of CS1 regulates NK cell cytolytic activity. CRACC positively regulated natural killer cell functions by a mechanism dependent on the adaptor EAT-2 but not the related adaptor SAP. However, in the absence of EAT-2, CRACC potently inhibited natural killer cell function. It was also inhibitory in T cells, which are typically devoid of EAT-2. Thus, CRACC can exert activating or inhibitory influences on cells of the immune system depending on cellular context and the availability of effector proteins.

Reference

Lee JK,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(10): 2791-9.
Tassi I,et al.(2005) The cytotoxicity receptor CRACC (CS-1) recruits EAT-2 and activates the PI3K and phospholipase Cgamma signaling pathways in human NK cells. J Immunol. 175(12): 7996-8002.
Lee JK,et al.(2007) CS1 (CRACC, CD319) induces proliferation and autocrine cytokine expression on human B lymphocytes. J Immunol. 179(7): 4672-8.
Cruz-Munoz ME,et al.(2009) Influence of CRACC, a SLAM family receptor coupled to the adaptor EAT-2, on natural killer cell function. Nat Immunol. 10(3): 297-305.