

## SIGNR1 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	CD209b antigen;DC-SIGNR1;OtB7;SIGNR1;1810030I22Rik;mSIGNR1
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse CD209B isoform 1 (NP_081248.2) (Gln 74-Gly 325) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8CJ91-1
Molecular Weight:	31.4 kDa (predicted); 40 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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then

alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD209b, also known as SIGNR1, is a C-type lectin receptor. CD209b is present on most regions of mouse brain and found on microglia and dendritic cells but not on neurons or astrocytes. CD209b is implicated in the recently described SIGNR1 complement activation pathway, which operates against capsular polysaccharides in splenic marginal macrophages. CD209b in rat is homologue to SIGNR1 in mouse, both of which are found to mediate the uptake of dextran or CPS14 within the splenic marginal zone.

### Reference

- Zola H, et al. (2007) CD molecules 2006-human cell differentiation molecules. *J Immunol Methods*. 318 (1-2): 1-5.
- Ho IC, et al. (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. *Nat Rev Immunol*. 9 (2): 125-35.
- Matesanz-Isabel J, et al. (2011) New B-cell CD molecules. *Immunology Letters*. 134 (2): 104-12.
- Park JY, et al. (2009) The C-type lectin CD209b is expressed on microglia and it mediates the uptake of capsular polysaccharides of *Streptococcus pneumoniae*. *Neuroscience Letters*. 450 (3): 246-51.

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Tel: 781-999-4286 E\_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481