

CD157 Protein, Rat, Recombinant (His)

General Information

Synonyms:	bone marrow stromal cell antigen 1
Protein Construction:	A DNA sequence encoding the rat BST1 (Q63072) (Met1-Glu293) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 28
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q63072
Molecular Weight:	31.2 kDa (predicted); 38-42 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:	> 90 % 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. CD157, also known as ADP-ribosyl cyclase 2, is an ectoenzyme sharing several characteristics with ADP-ribosyl cyclase CD38. CD157 was originally identified as a bone marrow stromal cell molecule (BST-1) with a glycosylphosphatidylinositol (GPI) anchor to bind to the cell surface. CD157 is prevalently expressed by cells of the myeloid lineage. CD157 could act as a receptor with signal transduction capability. Further, it regulates calcium homeostasis and promotes polarization in neutrophils and mediates superoxide (O₂⁻) production in the human U937 myeloid line.

Reference

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- Ortolan E, et al. (2002) CD157, the janus of CD38 but with a unique personality. *Cell Biochemistry and Function*. 20 (4): 309-22.

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