Cynomolgus / Rhesus CD38 Protein (ECD, His Tag)

Catalog Number: **90050-C08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD38

Protein Construction:

A DNA sequence encoding the cynomolgus/rhesus CD38 (Q5VAN0/F6QEE7) (Leu44-Ile301) was expressed with a polyhistidine tag at the C-terminus. Cynomolgus and Rhesus CD38 sequences are identical.

Source: Cynomolgus, Rhesus

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE. > 95 % as determined by SEC-HPLC.

Bio Activity:

Measured by its ability to convert the substrate nicotinamide guanine dinucleotide (NGD+) to cyclic GDPribose. The specific activity is >5000pmols/min/ug.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Predicted N terminal: Leu 44

Molecular Mass:

The recombinant cynomolgus/rhesus CD38 comprises 269 amino acids and has a calculated molecular mass of 31.3 KDa. The apparent molecular mass of it is approximately 41 KDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:

Protein Description

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. Cluster of differentiation 38 (CD38), also known as ADP-ribosyl cyclase, is a glycoprotein found on the surface of many immune cells (white blood cells), including CD4+, CD8+, B and natural killer cells. It shares several characteristics with ADP-ribosyl cyclase 2 CD157. CD38 is a multifunctional ectoenzyme that catalyzes the synthesis and hydrolysis of cyclic ADP-ribose (cADPR) from NAD+ to ADP-ribose. It also functions in cell adhesion, signal transduction and calcium signaling. CD38 has been used as a prognostic marker in leukemia. It can also be used to identify plasma cells.

References

1.Zola H, *et al.* (2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5. 2.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. 3.Matesanz-Isabel J, *et al.* (2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12.