

## CD38 Protein, Human, Recombinant (His), PE conjugated

### General Information

Synonyms:	T10;ADPRC1;ADPRC 1;CD38 molecule
Protein Construction:	Recombinant human CD38 (NP_001766.2, extracellular domain, Val 43-Ile 300) are conjugated with PE under optimum conditions, the unreacted PE was removed.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_001766.2

### QC Testing

Biological Activity:	Tested by Flow cytometric analysis of anti-CD38 CAR expression.
Formulation:	Aqueous solution containing 0.5% BSA and 0.03% Proclin 300

### Preparation and Storage

#### Stability & Storage:

This reagent is stable for 6 months when stored at 2°C-8°C. Protected from prolonged exposure to light. Do not freeze!

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue 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. 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<sup>+</sup> 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.

#### 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.

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