

## CD96 Protein, Human, Recombinant (His), Biotinylated

### General Information

Synonyms:	CD96 molecule;TACTILE
Protein Construction:	A DNA sequence encoding the human CD96 isoform 2 (P40200-2) extracellular domain (Met1-Met503) was expressed with a polyhistidine tag at the C-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: Val 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P40200-2
Molecular Weight:	55 kDa (predicted); 120-130 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Immobilized human CD155/PVR (Fc Tag) at 2 µg/mL (100 µL/well) can bind CD96 (His Tag), Biotinylated, the EC50 of CD96 (His Tag), Biotinylated is 150-800 ng/mL.
Purity:	> 85 % 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. The CD155 ligand CD96 is a member of the Ig superfamily. It's an immunoglobulin-like protein tentatively allocated to the repertoire of human NK receptors. NK cells recognize poliovirus receptor (PVR), a nectins and nectin-like protein family member serve to mediate cell-cell adhesion, cell migration, with the presence of an additional receptor, CD96. CD96 promotes NK cell adhesion to target cells expressing PVR, stimulates cytotoxicity of activated NK cells, and mediates acquisition of PVR from target cells. The effect the cells with mutated CD96 protein lost adhesion and growth activities indicates that CD96 mutations may cause a form of the C syndrome by interfering with cell adhesion and growth. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### 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
- Anja Fuchs, et al. (2004) Cutting Edge: CD96 (Tactile) Promotes NK Cell-Target Cell Adhesion by Interacting with the Poliovirus Receptor (CD155). *The Journal of Immunology*. 172 (7): 3994-8.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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