Human CD96/TACTILE Protein,
ECD (Extracellular Domain), Fc-fusion, Recombinant

**Background:**
CD96, also known as Tactile (T cell-activated increased late expression), is a single pass type I transmembrane protein of the immunoglobulin superfamily (IgSF). The extracellular domain (ECD) of CD96 contains 2 V-type and 1 C-type Ig-like domains, which are highly glycosylated. An 80-kDa soluble form of CD96 is elevated in human serum during chronic hepatitis B. CD96 is expressed on activated T, NK and a subpopulation of B cells as well as on acute myeloid leukemia and myelodysplastic stem cells. CD96 is allocated to the repertoire of human NK receptors. NK cells recognize poliovirus receptor (PVR) or CD155, a nectins and nectin-like protein family member serve to mediate cell-cell adhesion and cell migration. CD96 may be involved in adhesive interactions of activated T and NK cells during the late phase of the immune response. CD96 promotes NK cell adhesion to target cells expressing PVR, stimulates cytotoxicity of activated NK cells. The most N-terminal Ig-like domain of CD96 binds to PVR. On NK cells, co-stimulatory molecules CD96 and DNAM-1 (CD226) are thought to have paired activity with inhibitory TIGIT, all of which bind CD155 and various members of nectin family. CD96 may function at a time after T and NK cells have penetrated the endothelium using integrins and selectins, when they are actively engaging diseased cells and moving within areas of inflammation. CD96 mutations may cause a form of the C syndrome, a set of developmental anomalies in cranial bone, skin and viscera.

**Gene Symbol:** CD96

**Gene Synonym:** CD96; TACTILE

**Full Name:** Cell surface antigen CD96; T-cell surface protein tactile; T cell activation, increased late expression; T cell-activated increased late expression protein

**NCBI Gene ID:** 10225

**UniProt Entry:** P40200

**Species:** Homo sapiens

**Molecule Class:** 1-pass type I transmembrane

**Gene Family:** Ig superfamily

**Pathway & Disease:**
Cell Adhesion
Immune Cell Activation
NK-T Cell Adhesion
NK-mediated Cytotoxicity

**Research Area:**
Cancer
Immunology

**References:**

**Construct Detail:** The recombinant human CD96-Fc fusion is expressed as a 719-amino acid protein consisting of Val22 - Gly502 region of CD96 (UniProt#P40200-2) and a C-terminal Fc from human IgG1, which exists as a dimer under non-reducing conditions.

**Source:** Human cells stably expressing CD96-Fc and growing in chemical-defined media with no animal component or antibiotics.

**M.W.:** Calculated molecular mass 80.1 kDa; estimated by SDS-PAGE under reducing condition 100-110 kDa probably due to glycosylation. Calculated extinction coefficients (M-1 cm-1, at 280nm): 108135.

**Purity:** >95% judged by SDS-PAGE under reducing condition (see the gel image inserted).

**Formulation:** Supplied at 0.5 mg/ml in sterile PBS pH7.4 (concentration determined by UV spectrometry and verified by SDS-PAGE and Coomassie blue staining).

**Endotoxin:** <0.1 EU per 1 µg of purified recombinant protein determined by the LAL method.

**Bioactivity:** Binds PVR/CD155 and neutralizes its mediated signaling activity.

**Storage:** The product is shipped at 4°C. Upon receipt, centrifuge the vial briefly before opening. Store at −20°C and the product is stable for 6 months. Avoid repeated freeze-thaw cycles.

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