

**HUMAN CD56 PROTEIN, HFC TAG****Cat.#:** 11340**Product Name:** Human CD56 Protein**Size:** 10 µg, 50 µg and 100 µg**Synonyms:** NCAM1;CD56;MSK39;NCAM**Target:** CD56**UNIPROT ID:** P13591**Description:** Recombinant human CD56 protein with C-terminal human Fc tag

**Background:** This gene encodes a cell adhesion protein which is a member of the immunoglobulin superfamily. The encoded protein is involved in cell-to-cell interactions as well as cell-matrix interactions during development and differentiation. The encoded protein plays a role in the development of the nervous system by regulating neurogenesis, neurite outgrowth, and cell migration. This protein is also involved in the expansion of T lymphocytes, B lymphocytes and natural killer (NK) cells which play an important role in immune surveillance. This protein plays a role in signal transduction by interacting with fibroblast growth factor receptors, N-cadherin and other components of the extracellular matrix and by triggering signalling cascades involving FYN-focal adhesion kinase (FAK), mitogen-activated protein kinase (MAPK), and phosphatidylinositol 3-kinase (PI3K). One prominent isoform of this gene, cell surface molecule CD56, plays a role in several myeloproliferative disorders such as acute myeloid leukemia and differential expression of this gene is associated with differential disease progression. For example, increased expression of CD56 is correlated with lower survival in acute myeloid leukemia patients whereas increased severity of COVID-19 is correlated with decreased abundance of CD56-expressing NK cells in peripheral blood. Alternative splicing results in multiple transcript variants encoding distinct protein isoforms.

**Species/Host:** HEK293

**Molecular Weight:** The protein has a predicted molecular mass of 102.3 kDa after removal of the signal peptide. The apparent molecular mass of CD56-hFc is approximately 130–250 kDa due to glycosylation.

**Molecular Characterization:** CD56(Leu220–Gly708) hFc(Glu99–Ala330)

**Purity:** The purity of the protein is greater than 90% as determined by SDS-PAGE and Coomassie blue staining.

**Formulation & Reconstitution:** Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization.

**Storage & Shipping:** Store at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at  $-80^{\circ}\text{C}$  (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

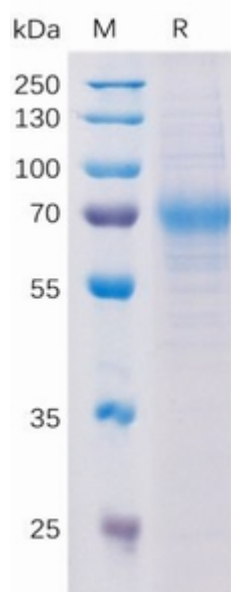


Figure 1. Human CD56 Protein, hFc Tag on SDS-PAGE under reducing condition.