

HUMAN NKG2D PROTEIN, MFC TAG

Cat.#: 11200

Product Name: Human NKG2D Protein

Size: 10 µg, 50 µg and 100 µg

Synonyms: NKG2D;D314;LRK1;K cell receptor D

Target: NKG2D

UNIPROT ID: P26718

Description: Recombinant human NKG2D protein with N-terminal mouse Fc

Background: Natural killer (NK) cells are lymphocytes that can mediate lysis of certain tumor cells and virus-infected cells without previous activation. They can also regulate specific humoral and cell-mediated immunity. NK cells preferentially express several calcium-dependent (C-type) lectins, which have been implicated in the regulation of NK cell function. The NKG2 gene family is located within the NK complex, a region that contains several C-type lectin genes preferentially expressed in NK cells. This gene encodes a member of the NKG2 family. The encoded transmembrane protein is characterized by a type II membrane orientation (has an extracellular C terminus) and the presence of a C-type lectin domain. It binds to a diverse family of ligands that include MHC class I chain-related A and B proteins and UL-16 binding proteins, where ligand-receptor interactions can result in the activation of NK and T cells. The surface expression of these ligands is important for the recognition of stressed cells by the immune system, and thus this protein and its ligands are therapeutic targets for the treatment of immune diseases and cancers. Read-through transcription exists between this gene and the upstream KLRC4 (killer cell lectin-like receptor subfamily C, member 4) family member in the same cluster.

Species/Host: HEK293

Molecular Weight: The protein has a predicted molecular mass of 42.8 kDa after removal of the signal peptide. The apparent molecular mass of mFc-NKG2D is approximately 50–65 kDa due to glycosylation.

Molecular Characterization: mFc(Pro99–Lys330) NKG2D(Ile73–Val216)

Purity: The purity of the protein is greater than 95% 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°C to –80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at –80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

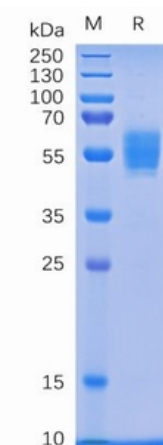


Figure 1. Human NKG2D Protein, mFc Tag on SDS-PAGE under reducing condition.

Human NKG2D, mFc Tagged protein ELISA

0.2 μ g of MICA, His Tagged protein per well

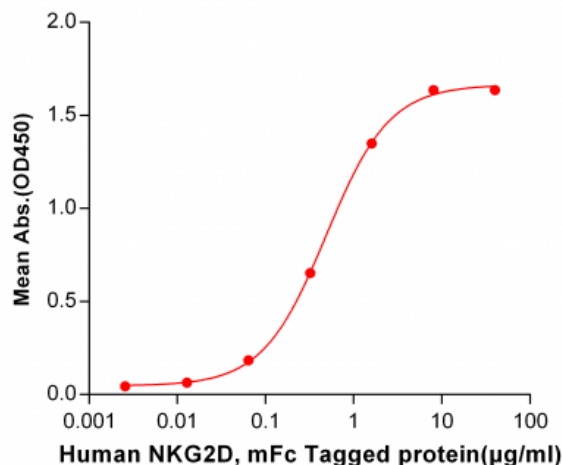


Figure 2. ELISA plate pre-coated by 2 μ g/ml (100 μ l/well) Human MICA, His tagged protein 11263 can bind Human NKG2D, mFc tagged protein (11200) in a linear range of 0.064-1.6 μ g/ml.

Human NKG2D, mFc Tagged protein ELISA

0.2 μ g of Human NKG2D, mFc Tagged protein per well

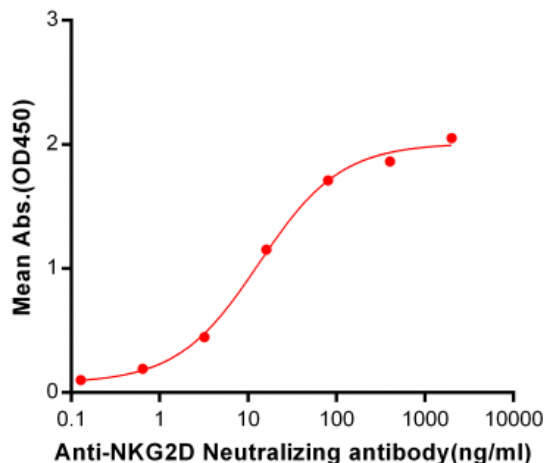


Figure 3. ELISA plate pre-coated by 2 μ g/ml (100 μ l/well) Human NKG2D, mFc tagged protein (11200) can bind Anti-NKG2D Neutralizing antibody 28048 in a linear range of 0.64-400 ng/ml.