Data Sheet (Cat.No.TMPK-00105)

TargetMol

NKG2D/CD314 Protein, Human, Recombinant (His & Avi)

General Information

Synonyms:	NKG2-D;KLR;CD314;NKG2D;D12S2489E
Protein Construction:	Phe78-Val216
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P26718
Molecular Weight:	19.0 kDa (predicted). Due to glycosylation, the protein migrates to 36-38 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	1. Immobilized Human NKG2D, His Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Human ULBP-6, hFc Tag with the EC50 of 12.9ng/ml determined by ELISA. 2. Human MICB, hFc Tag captured on CM5 Chip via Protein A can bind Human NKG2D, His Tag with an affinity constant of 95.15 nM as determined in SPR assay.
Purity:	> 95% as determined by Tris-Bis 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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

NKG2D is a type II transmembrane glycoprotein having an extracellular lectin-like domain. This domain lacks the recognizable calcium-binding sites found in true C-type lectins and binds protein rather than carbohydrate ligands. Human NKG2D is expressed on CD8 alpha beta T cells, gamma δ T cells, NK cells and NKT cells.

Reference

Spear P, et al. NKG2D CAR T-cell therapy inhibits the growth of NKG2D ligand heterogeneous tumors[J]. Immunology and Cell Biology, 2013, 91(6):435-440.

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