Data Sheet (Cat.No.TMPY-05074)

TargetMol

NKG2A/CD159a Protein, Human, Recombinant (aa 94-233, His)

General Information

Synonyms:	CD159A;NKG2A;killer cell lectin-like receptor subfamily C, member 1;NKG2
Protein Construction:	A DNA sequence encoding the human KLRC1 (NP_002250.1) (Pro94-Leu233) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P26715-1
Molecular Weight:	18.4 kDa (predicted); 34 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

NKG2, also known as NKG2A(CD159A), is a member of the killer cell lectin-like receptor family. This family is a group of transmembrane proteins preferentially expressed in NK cells. Members of this family are characterized by the type II membrane orientation and the presence of a C-type lectin domain. NKG2 contains 1 C-type lectin domain and forms a complex with another family member, KLRD1/CD94. It is expressed only in NK-cells, but not in T-cells or B-cells. It has been shown that NKG2 represents a family of related cDNA clones, designated NKG2A,

NKG2B, NKG2C, and NKG2D, which encode type 2 integral membrane proteins (extracellular C-terminus) containing a C-type lectin domain. 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. NKG2 functions as a receptor for the recognition of MHC class I HLA-E molecules by NK cells and some cytotoxic T-cells.

Reference

Angelini DF, et al. (2011) NKG2A inhibits NKG2C effector functions of gamma delta T cells: implications in health and disease. J Leukoc Biol. 89(1):75-84.

Ge SJ, et al. (2011) Expression of NKG2D and NKG2A with their ligands MHC-I A/B and HLA-E in acute leukemia patients and its significance. Zhongguo Shi Yan Xue Ye Xue Za Zhi. 19(2):312-6.

Ablamunits V, et al. (2011) NKG2A is a marker for acquisition of regulatory function by human CD8+ T cells activated with anti-CD3 antibody. Eur J Immunol. 41(7):1832-42.

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