

Human NKG2D / CD314 Protein (aa 78-216, His Tag)

Catalog Number: 10575-H07B



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD314; D12S2489E; KLR; NKG2-D; NKG2D; D6H12S2489E; NKG2-D; Nkg2d

Protein Construction:

A DNA sequence encoding the human NKG2D (Phe78-Val216) was fused with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Immobilized human His-NKG2D (78-216) at 10 µg/ml (100 µl/well) can bind human ULBP1-Fch (Cat:10679-H03H). The EC₅₀ of human ULBP1-Fch (Cat:10679-H03H) is 0.04-0.08 µg/ml. 2. Immobilized human His-NKG2D (78-216) at 10 µg/ml (100 µl/well) can bind human MICB-Fch (Cat:10759-H03H). The EC₅₀ of human MICB-Fch (Cat:10759-H03H) is 15.9-37.1 ng/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human NKG2D consists of 157 amino acids and has a calculated molecular mass of 18.4 kDa.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

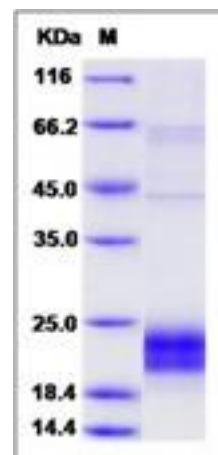
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

NKG2D, also known as CD314, is an immune receptor which consists of two disulphide-linked type II transmembrane proteins with short intracellular proteins incapable to transduce signals. In order to transduce signals, NKG2D needs adaptor proteins and it uses two adaptor proteins, DAP10 and DAP12. These two adaptor proteins associate as homodimers to NKG2D- therefore the entire receptor complex appears as a hexamer. NKG2D can send co-stimulatory signals to activate CD8 T cells. NKG2D also plays an important role in viral control. Cellular stress can induce ligands for NKG2D which results in the cell susceptible to NK cell-mediated lysis.

References

1. Houchins J, *et al.* (1991) DNA sequence analysis of NKG2, a family of related cDNA clones encoding type II integral membrane proteins on human natural killer cells. *J Exp Med.* 173: 1017-102.
2. Bauer S, *et al.* (1999) Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. *Science.* 285(5428):727-9.
3. Zafirova B, *et al.* (2011) Regulation of immune cell function and differentiation by the NKG2D receptor. *Cell Mol Life Sci.* 68(21):3519-29.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>