Biotinylated Human NKG2C&CD94 Protein, His,Avitag™ (MALS verified)

Catalog # NC4-H82E3

Synonym

NKG2C & CD94

Source

Biotinylated Human NKG2C&CD94, His,Avitag (NC4-H82E3) is expressed from human 293 cells (HEK293). It contains AA Ile 94 - Leu 231 (NKG2C) & Asp 57 - Ile 179 (CD94) (Accession # P26717-1 (NKG2C) & Q13241-1 (CD94) (F102S, mutation caused by sequence update)).
Predicted N-terminus: Ile 94

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 34.3 kDa. The protein migrates as 45-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Purity

>90% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

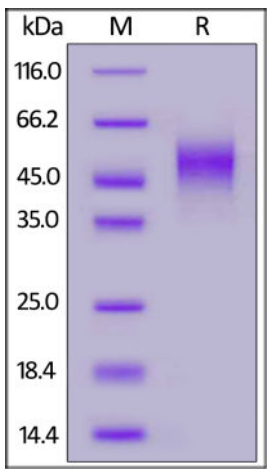
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

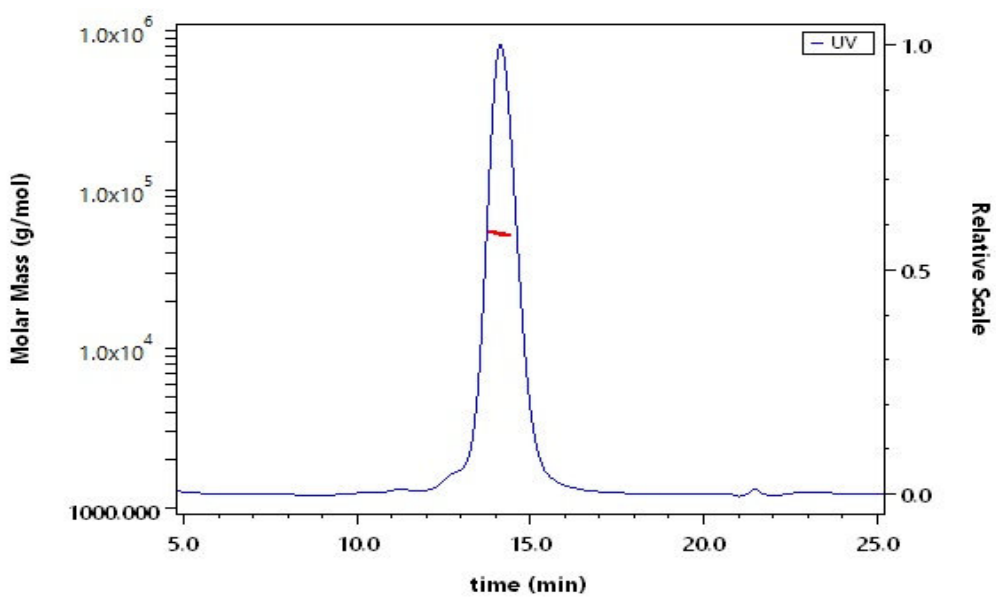
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



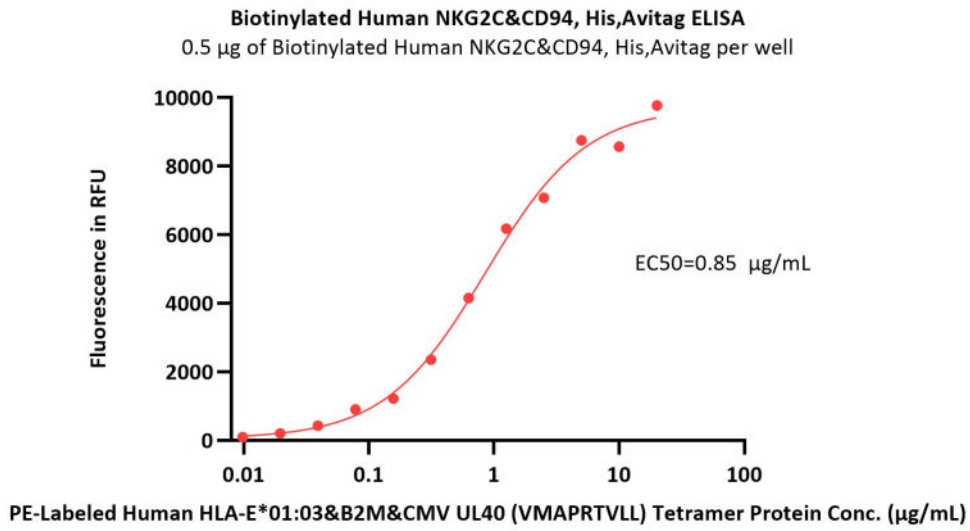
Biotinylated Human NKG2C&CD94, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



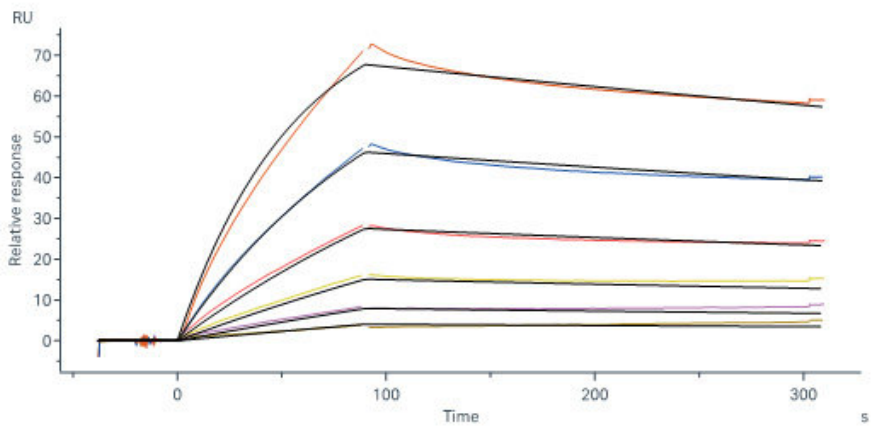
The purity of Biotinylated Human NKG2C&CD94, His,Avitag (Cat. No. NC4-H82E3) is more than 95% and the molecular weight of this protein is around 50-60 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Human NKG2C&CD94, His,Avitag (Cat. No. NC4-H82E3) at 5 μg/mL (100 μL/well) can bind PE-Labeled Human HLA-E*01:03&B2M&CMV UL40 (VMAPRTVLL) Tetramer Protein (Cat. No. HLU-HP2H5) with a linear range of 0.01-1.25 μg/mL (QC tested).

Bioactivity-SPR



PE-Labeled Human HLA-E*01:03&B2M&CMV UL40 (VMAPRTVLL) Tetramer Protein (Cat. No. HLU-HP2H5) immobilized on CM5 Chip can bind Biotinylated Human NKG2C&CD94, His,Avitag (Cat. No. NC4-H82E3) with an affinity constant of 21.9 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

CD94 plays a role as a receptor for the recognition of MHC class I HLA-E molecules by NK cells and some cytotoxic T-cells. KLRD1 (CD94) is an antigen preferentially expressed on NK cells and is classified as a type II membrane protein because it has an external C terminus. NKG2C/CD159c is used as a receptor for NK cells and some cytotoxic T cells to recognize MHC class I HLA-E molecules. CD94 pairs with the NKG2 molecule as a heterodimer. The CD94/NKG2 complex, on the surface of natural killer cells interacts with Human Leukocyte Antigen (HLA)-E on target cells.