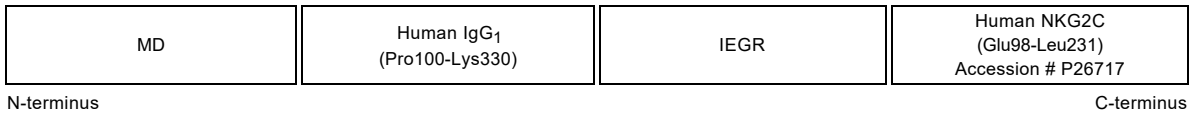
Recombinant Human NKG2C/CD159c Fc Chimera

Catalog Number: 138-NK

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human NKG2C/CD159c protein



N-terminal Sequence Analysis	Met
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	42 kDa

SPECIFICATIONS

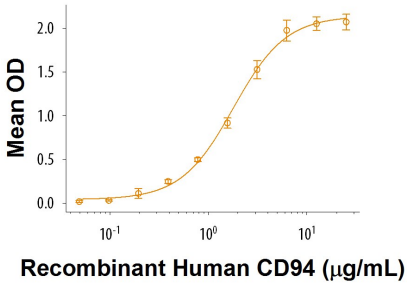
SDS-PAGE	53-62 kDa, reducing conditions
Activity	Measured by its ability to bind Recombinant Human CD94 (Catalog # 9270-CD) in a functional ELISA. The ED_{50} for this effect is 0.3-2.4 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 400 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

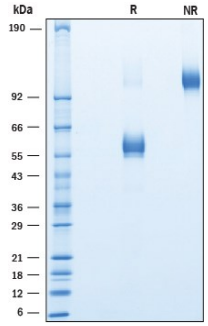
DATA

Binding Activity



Recombinant Human NKG2C/CD159c Fc Chimera (Catalog # 138-NK) binds Recombinant Human CD94 (Catalog # 9270-CD) in a functional ELISA. The ED_{50} for this effect is 0.3-2.4 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Human NKG2C/CD159c (Catalog # 138-NK) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 53-62 kDa and 110-120 kDa, respectively.

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Recombinant Human NKG2C/CD159c Fc Chimera

Catalog Number: 138-NK

BACKGROUND

Human NKG2C (NK cell Group 2 isoform C; Killer cell lectin-like receptor subfamily C, member 2) is a member of the C-type lectin-like superfamily of proteins. Natural killer (NK) receptors are expressed in both NK cells and cytotoxic $CD8^+$ T cells and have both activating and inhibitory members (1-3). Regulation of the balance between the activating and inhibitory receptors is important and lack of such regulation has been implicated in autoimmunity (4). The NKG2 family includes seven receptors: NKG2A, -B, -C, -D, -E, -F, and -H, which is the longer isoform of NKG2E. Except for NKG2D and NKG2F, the NKG2 family members form heterodimers with CD94 (5, 6). NKG2C interacts with the adapter molecule DAP12 and acts as activating receptor when heterodimerized with CD94 (7). Human NKG2C is synthesized as a 231 amino acid (aa) protein that includes a 70 aa cytoplasmic domain, a 23 aa transmembrane segment, and a 138 aa extracellular domain (ECD). Within the ECD, human NKG2C shares 40% sequence identity with mouse NKG2C. NKG2C-CD94 heterodimers bind to the widely expressed nonclassical MHC-I molecule, HLA-E (Qa-1b in mouse), which presents a peptide derived from the signal peptide of classical MHC-I molecules (8, 9). Triggering the NKG2C-CD94 complex may activate the cytolytic activity and cytokine production of NK and $CD8^+$ T cells (8, 10). Human cytomegalovirus (HCMV) infection promotes the differentiation and expansion of $NKG2C^+$ NK cell subsets, possibly involving a cognate interaction of CD94/NKG2C with ligand(s) displayed by HCMV-infected cells (11, 12).

References:

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