NKG2C/CD159c Protein, Mouse (HEK293, hFc)

Cat. No.:	HY-P700801
Synonyms:	CD159c; KLRC2; NKG2C; NK cell receptor C
Species:	Mouse
Source:	HEK293
Accession:	Q9MZK6 (I94-L231)
Gene ID:	709790
Molecular Weight:	52-60 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	NKG2C/CD159c protein operates as an immune activating receptor crucial for self-nonself discrimination. When forming a complex with KLRD1 on cytotoxic lymphocyte subsets, it recognizes non-classical major histocompatibility complex MHC-E loaded with signal sequence-derived peptides from non-classical MHC-G molecules. This recognition likely contributes to the generation and effector functions of adaptive natural killer (NK) cells and plays a role in maternal-fetal tolerance during pregnancy. NKG2C/CD159c also regulates the effector functions of terminally differentiated cytotoxic lymphocyte subsets, particularly in the adaptive NK cell response to viral infections. Upon MHC-E-peptide binding, it transmits intracellular signals via the adapter protein TYROBP/DAP12, leading to the phosphorylation of proximal signaling molecules and cell activation. NKG2C/CD159c forms a heterodimer with KLRD1, and this complex, disulfide-linked, interacts with TYROBP/DAP12 homodimer, an interaction crucial for the expression of NKG2C/CD159c on the cell surface. This intricate mechanism underscores the significant role of NKG2C/CD159c in immune responses, particularly in recognizing and responding to specific MHC-E-peptide complexes and modulating the functions of cytotoxic lymphocytes.

Caution: Product has not been fully validated for medical applications. For research use only.

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