CD161 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P72750
Synonyms:	Killer cell lectin-like receptor subfamily B member 1; NKR-P1A; CD161; KLRB1; CLEC5B
Species:	Human
Source:	HEK293
Accession:	Q12918 (Q67-S225)
Gene ID:	3820
Molecular Weight:	55-70 kDa

PROPERTIES

AA Sequence	Q K S S I E K C S V D I Q Q S R N K T T E R P G L L N C P I Y W Q Q L R E K C L L F S H T V N P W N N S L A D C S T K E S S L L L I R D K D E L I H T Q N L I R D K A I L F W I G L N F S L S E K N W K W I N G S F L N S N D L E I R G D A K E N S C I S I S Q T S V Y S E Y C S T E I R W I C Q K E L T P V R N K V Y P D S
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	CD161 Protein assumes a crucial role in inhibiting natural killer (NK) cell cytotoxicity. Upon activation, CD161 stimulates specific acid sphingomyelinase/SMPD1, resulting in a significant increase in intracellular ceramide levels. The activation process also leads to the stimulation of AKT1/PKB and RPS6KA1/RSK1 kinases, along with a marked enhancement of T-cell proliferation induced by anti-CD3. Functioning as a lectin, CD161 binds to the terminal carbohydrate Gal-alpha(1,3)Gal epitope and the N-acetyllactosamine epitope. Furthermore, it acts as a ligand for CLEC2D/LLT1, inhibiting NK cell-mediated cytotoxicity and interferon-gamma secretion in target cells. Existing as a homodimer with disulfide linkage, CD161 interacts with acid sphingomyelinase/SMPD1, contributing to its multifaceted regulatory functions in immune responses.

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

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