LILRB1/CD85j/ILT2 Protein, Human (435a.a, HEK293, His)

Cat. No.:	HY-P70179
Synonyms:	rHuLIR-1/LILRB1, His; Leukocyte Immunoglobulin-Like Receptor Subfamily B Member 1; LIR-1; Leukocyte Immunoglobulin-Like Receptor 1; CD85 Antigen-Like Family Member J; Immunoglobulin-Like Transcript 2; ILT-2; Monocyte/Macrophage Immunoglobulin-Like Receptor 7; MIR-7; CD85j; LILRB1; ILT2; LIR1; MIR7
Species:	Human
Source:	HEK293
Accession:	ADJ55949.1 (G24-H458)
Gene ID:	10859
Molecular Weight:	65-90 kDa

PROPERTIES

AA Sequence	G H L P K P T L W A E P G S V I T Q G S P V T L R C Q G G Q E T Q E Y R L Y R E K K T A P W I T R I P Q E L V K K G Q F P I P S I T W E H A G R Y R C Y Y G S D T A G R S E S S D P L E L V V T G A Y I K P T L S A Q P S P V V N S G G N V T L Q C D S Q V A F D G F I L C K E G E D E H P Q C L N S Q P H A R G S S R A I F S V G P V S P S R R W W Y R C Y A Y D S N S P Y E W S L P S D L L E L L V L G V S K K P S L S V Q P G P I V A P E E T L T L Q C G S D A G Y N R F V L Y K D G E R D F L Q L A G A Q P Q A G L S Q A N F T L G P V S R S Y G G Q Y R C Y G A H N L S S E W S A P S D P L D I L I A G Q F Y D R V S L S V Q P G P T V A S G E N V T L L C Q S Q G W M Q T F L L T K E G A A D D P W R L R S T Y Q S Q K Y Q A E F P M G P V T S A H A G T Y R C Y G S Q S S K P Y L L T H P S D P L E L V V S G P S G G P S S P T T G P T S T S G P E D Q P L T P T G S D P Q S G L G R H
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, 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	The LILRB1/CD85j/ILT2 Protein serves as a receptor for class I MHC antigens, demonstrating recognition across a broad spectrum of HLA-A, HLA-B, HLA-C, HLA-G, and HLA-F alleles. Additionally, it acts as a receptor for H301/UL18, a human cytomegalovirus class I MHC homolog. Ligand binding induces inhibitory signals, leading to the down-regulation of the immune response. The engagement of LILRB1 by class I MHC molecules on natural killer cells or T-cells protects target cells from lysis, and interaction with HLA-B or HLA-E inhibits FCER1A signaling and serotonin release. Moreover, LILRB1 inhibits FCGR1A-mediated cellular responses, including phosphorylation of proteins and mobilization of intracellular calcium ions. It recognizes HLA-G in complex with B2M/beta-2 microglobulin and a nonamer self-peptide, triggering the secretion of growth-promoting factors by decidual NK cells. Additionally, it reprograms B cells toward an immune suppressive phenotype. LILRB1 binds PTPN6 when phosphorylated and interacts with FCER1A, FCGR1A, and the UL18 protein from human cytomegalovirus. It also interacts with peptide-bound HLA-G-B2M and HLA-F-B2M complexes, highlighting its diverse roles in immune modulation and viral recognition.

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