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KIR3DL1 Human

Killer Cell Immunoglobulin-Like Receptor, 3Domains Long Cytoplasmic Tail 1 Human Recombinant
RCP1166

Product Overview

Name	KIR3DL1 Human

Description

Killer Cell Immunoglobulin-Like Receptor, 3 Domains Long Cytoplasmic Tail 1 Human Recombinant

Accession (Primary)	P43629

Synonyms

Killer cell immunoglobulin-like receptor 3DL1, MHC class I NK cell receptor, Natural killer-associated transcript 3, NKAT-3, p70 natural killer cell receptor clones CL-2/CL-11, HLA-BW4-specific inhibitory NK cell receptor, CD158 antigen-like family member E, CD158e antigen, KIR3DL1, CD158E, NKAT3, NKB1, KIR, NKB1B, CD158E1, MGC119726, MGC119728, MGC126589, MGC126591.

Introduction

Killer-cell immunoglobulin-like receptors (KIRs), are a family of cell surface glycoproteins found on Natural Killer (NK) Cells, which are important cells of the immune system. They control the killing function of these cells by interacting with MHC class I molecules, which are expressed on all cell types. This interaction allows them to identify virally infected cells or tumor cells that have a distinctive low level of Class I MHC on their surface. The majority of KIRs are inhibitory, which means that their recognition of MHC suppresses the cytotoxic activity of their NK cell. Only a limited number of KIRs have the capacity to activate cells. The KIR genes are found in a cluster on chromosome 19q13.4 within the 1 Mb leukocyte receptor complex (LRC). KIR molecules are extremely polymorphic, meaning their gene sequences differ significantly between individuals, so that different individuals have different arrays/repertoires of KIR genes. The KIR proteins are categorized by the number of extracellular immunoglobulin domains (2D or 3D) and by whether they have a long (L) or short (S) cytoplasmic domain. KIR proteins with the long cytoplasmic domain transduce inhibitory signals upon ligand binding via an immune tyrosine-based inhibitory motif (ITIM). Whereas KIR proteins with the short cytoplasmic domain lack the ITIM motif and instead associate with the TYRO protein tyrosine kinase binding protein to transduce activating signals. The three Ig-domain from of inhibitory killer cell Ig-like receptor 1(KIR3DL1, NKB1, nkat3, p70KIR) is a NK cell receptor for polymorphic HLA-B determinant. KIR3DLl recognizes the Bw4 determinant defined by sequence motifs at positions 77-83 of the HLA-B heavy chain. The cytoplasmic tail of KIR, which contains two immunoreceptor tyrosine-based inhibition motifs (ITIMs), mediates inhibitory signal transduction that prevents killer cell-mediated cytotoxicity. A His-tag fusion protein of KIR3DL1 cytoplasmic tail (361-444aa) was overexpressed as insoluble protein aggregates (inclusion bodies).

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Source

Escherichia Coli.

Physical Appearance

Sterile filtered colorless solution.

Formulation

The protein (1mg/ml) contains 25mM Tris-HCl (pH7.5) and 100mM NaCl.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Purity

Greater than 95.0% as determined by(a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Amino acid sequence

MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSTSGT IDKLDIEFHLWCSNKKNAAV MDQEPAGNRT ANSEDSDEQD PEEVTYAQLD HCVFTQRKIT RPSQRPKTPP TDTILYTELP NAKPRSKVVS CP.

Precautions

KIR3DL1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P43629)