
Product Data Sheet

Product Name: KIR2DL1 Human
 Cat. No.: GP23741
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Killer cell immunoglobulin-like receptor 2DL1; MHC class I NK cell receptor; Natural killer-associated transcript 1; NKAT-1; p58 natural killer cell receptor clones CL-42/47.11; p58 NK receptor; p58.1 MHC class-I-specific NK receptor; CD158 antigen-like family member A; CD158a antigen; KIR2DL1; CD158A; NKAT1; NKAT; p58.1; KIR221; KIR-K64.		
Amino Acid Sequence	MEGVHRKPSL LAHPGRLVKS EETVILQCWS DVMFEHFLH REGMFNDTLR LIGEHHDGVS KANFSISRMT QDLAGTYRCY GSVTHSPYQV SAPSDPLDIV IIGLYEKPSL SAQLGPTVLA GENVTLSCSS RSYDMYHLS REGEAHERRL PAGPKVNGTF QADFPLGPAT HGGTYRCFGS FHDSPEYWSK SSDPLLVSVT GN.		
Formulation	The protein (1mg/ml) contains 25mM Tris- HCl (pH-7.5).		

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

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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. KIR2DL1 is an inhibitory Killer Cell Ig-like Receptor (KIR, previously called p58 KIR, p58.1, cl-42, NKAT1, or KIR-K6), which recognizes class I MHC molecules (HLA-Cw2, -Cw4, -Cw5, and Cw6). The extracellular domain of KIR2DL1 was over expressed as insoluble protein aggregates (inclusion bodies).

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.

Background

KIR2DL1 Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing amino acids 1-202 and having a molecular mass of 22.2 kDa. The KIR2DL1 is purified by proprietary chromatographic techniques.

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