
Product Data Sheet

Product Name: KIR2DS4 Human
 Cat. No.: GP23743
 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 2DS4; MHC class I NK cell receptor; Natural killer-associated transcript 8; NKAT-8; P58 natural killer cell receptor clone CL-39; p58 NK receptor; CL-17; CD158 antigen-like family member I; CD158i antigen; KIR2DS4; CD158I; KKA3; NKAT8; KIR1D; KIR412; MGC120019; MGC125315; MGC125317.		
Amino Acid Sequence	MEGVHRKPSF LALPGHLVKS EETVILQCWS DVMFEHFLLH REGKFNNTLH LIGEHHDGVS KANFSIGPMM PVLAGTYRCY GSVPHSPYQL SAPSDPLDMV IIGLYEKPSL SAQPGPTVQA GENVTLS CSS RSSYDMYHLS REGEAHERRL PAVRSINGTF QADFPLGPAT HGGTYRCFGS FRDAPYEWSN SSDPLLVSVT GN.		
Formulation	KIR2DS4 protein solution (1mg/ml) contains 20mM 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. KIR2DS4 is an activating Killer Cell Ig-like Receptor (KIR, previously called p50 KIR, p50.3, cl39, or KAR-K1), which may recognize class I MHC molecules. KIR2DS4 does not inhibit the activity of NK cells.

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

Recombinant Human KIR2DS4 produced in E.Coli is a single, non-glycosylated polypeptide chain (23-223 aa) containing a total of 202 amino acids and having a molecular mass of 22.2kDa. The KIR2DS4 is purified by proprietary chromatographic techniques.

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