



## Product Datasheet

<b>Product Name</b>	Killer Cell Immunoglobulin-Like Receptor, 2 Domains Long Cytoplasmic Tail 3 Human Recombinant
<b>Cata No</b>	CB501049
<b>Source</b>	<i>Escherichia Coli</i> .
<b>Synonyms</b>	Killer cell immunoglobulin-like receptor 2DL3, MHC class I NK cell receptor, Natural killer-associated transcript 2, NKAT-2, NKAT2a, NKAT2b, p58 natural killer cell receptor clone CL-6, p58 NK receptor, p58.2 MHC class-I-specific NK receptor, Killer inhibitory receptor cl 2-3, KIR-023GB, CD158 antigen-like family member B2, CD158b2 antigen, KIR2DL3, CD158B2, KIRCL23, NKAT2, p58, NKAT, GL183, CD158b, KIR-K7b, KIR-K7c, MGC129943.

### Description

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.

KIR2DL3 is an inhibitory Killer Cell Ig-like Receptor (KIR, previously called p58 KIR, cl-6, NKAT2 or KIR-K7), which recognizes class I MHC molecules (HLA-Cw1, -Cw3, -Cw7, and Cw8). KIR2DL3 inhibits the activity of NK cells thus preventing cell lysis.

Recombinant KIR2DL3 produced in E.Coli is a single, non-glycosylated polypeptide chain containing amino acids 1-202 and having a molecular mass of 22 kDa.

The KIR2DL3 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered colorless solution.

### Purity

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

### Formulation

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# California Bioscience

83103 Avenue 48, Ste.1B #204

Coachella, CA 92236 USA

Phone : +1.6268339877

Email : [info@cali-bio.com](mailto:info@cali-bio.com)

The protein (1mg/ml) contains 25mM Tris- HCl (pH-7.5).

## **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.**

## **Sequence**

MEGVHRKPSL LAHPGPLVKS EETVILQCWS  
DVRFQHLLH REGKFKDTLH LIGEHHDGIS  
KANFSIGPMM QDLAGTYRCY GSVTHSPYQL  
SAPSDPLDIV ITGLYEKPSL SAQPGPTVLA  
GESVTLSCSS RSSYDMYHLS REGEAHERRF  
SAGPKVNGTF QADFPLGPAT HGGTYRCFGS  
FRDSPYEWSN SSDPLLVSVT GN

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