

# KIR2DL1 (S-20): sc-17956

## BACKGROUND

NKAT (NK-associated transcripts) gene products, known as killer immunoglobulin-like receptors or KIRs, downregulate the cytotoxicity of NK cells upon recognition of specific class I major histocompatibility complex (MHC) molecules on target cells. This family of receptors is characterized by an extracellular region with two to three immunoglobulin-superfamily domains and a cytoplasmic domain with an antigen receptor activation motif (ARAM). KIRs and other inhibitory receptors also possess a common cytoplasmic sequence (I/VxYxxL/V) known as an ITIM (immunoreceptor tyrosine-based inhibitory motif). The human inhibitory human killer cell immunoglobulin-like receptor 2DL1, also designated KIR2DL1, CL-42, NKAT1, P58.1, or CD158 $\alpha$ -long form, is a 348 amino acid type I transmembrane protein. KIR2DL1 can bind human leukocyte antigen-C (HLA-C) via both polar and hydrophobic interactions through Met-44 in a binding pocket that coordinates Lys-80 of HLA-C.

## REFERENCES

1. Colonna, M. and Samaridis, J. 1995. Cloning of immunoglobulin-superfamily members associated with HLA-C and HLA-B recognition by human natural killer cells. *Science* 268: 405-408.
2. Suto, Y., et al. 1996. Chromosomal localization of the human natural killer cell class I receptor family genes to 19q13.4 by fluorescence *in situ* hybridization. *Genomics* 35: 270-272.
3. Winter, C.C., et al. 1998. Direct binding and functional transfer of NK cell inhibitory receptors reveal novel patterns of HLA-C allotype recognition. *J. Immunol.* 161: 571-577.
4. Fan, Q.R., et al. 2000. A disulfide-linked natural killer cell receptor dimer has higher affinity for HLA-C than wildtype monomer. *Eur. J. Immunol.* 30: 2692-2697.
5. Katz, G., et al. 2001. Recognition of HLA-Cw4 but not HLA-Cw6 by the NK cell receptor killer cell Ig-like receptor two-domain short tail number 4. *J. Immunol.* 166: 7260-7267.
6. Fan, Q.R., et al. 2001. Crystal structure of the human natural killer cell inhibitory receptor KIR2DL1-HLA-Cw4 complex. *Nat. Immunol.* 2: 452-460.

## SOURCE

KIR2DL1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KIR2DL1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17956 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

KIR2DL1 (S-20) is recommended for detection of a broad range of KIR family members of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of deglycosylated KIR2DL1: 36 kDa.

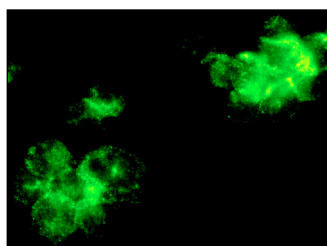
Molecular Weight of KIR2DL1 glycoprotein: 55-58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or NK-92 whole cell lysate: sc-364788.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



KIR2DL1 (S-20): sc-17956. Immunofluorescence staining of methanol-fixed Jurkat cells showing membrane localization.

## SELECT PRODUCT CITATIONS

1. Qu, B., et al. 2012. Human intestinal epithelial cells are susceptible to influenza virus subtype H9N2. *Virus Res.* 163: 151-159.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.