

KIR2DL1 (JJ C11.6): sc-53595

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 natural killer cell immunoglobulin-like receptor 2DL1, also designated KIR2DL1, CL-42, NKAT1, P58.1 or CD158a 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

- 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.
- Suto, Y., Maenaka, K., Yabe, T., Hirai, M., Tokunaga, K., Tadok, K. and Juji, T. 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.
- Winter, C.C., Gumperz, J.E., Parham, P., Long, E.O. and Wagtmann, N. 1998. Direct binding and functional transfer of NK cell inhibitory receptors reveal novel patterns of HLA-C allotype recognition. *J. Immunol.* 161: 571-577.
- Fan, Q.R., Long, E.O. and Wiley, D.C. 2000. A disulfide-linked natural killer cell receptor dimer has higher affinity for HLA-C than wildtype monomer. *Eur. J. Immunol.* 30: 2692-2697.

CHROMOSOMAL LOCATION

Genetic locus: KIR2DL1 (human) mapping to 19q13.42.

SOURCE

KIR2DL1 (JJ C11.6) is a mouse antibody raised against an NK cell clone expressing the KIR receptor of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KIR2DL1 (JJ C11.6) is available conjugated to agarose (sc-53595 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53595 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53595 PE), fluorescein (sc-53595 FITC), Alexa Fluor® 488 (sc-53595 AF488), Alexa Fluor® 546 (sc-53595 AF546), Alexa Fluor® 594 (sc-53595 AF594) or Alexa Fluor® 647 (sc-53595 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53595 AF680) or Alexa Fluor® 790 (sc-53595 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

KIR2DL1 (JJ C11.6) is recommended for detection of KIR2DL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for KIR2DL1 siRNA (h): sc-42893, KIR2DL1 shRNA Plasmid (h): sc-42893-SH and KIR2DL1 shRNA (h) Lentiviral Particles: sc-42893-V.

Molecular Weight of deglycosylated KIR2DL1: 36 kDa.

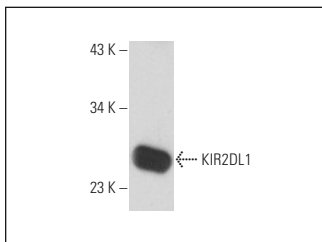
Molecular Weight of KIR2DL1 glycoprotein: 55-58 kDa.

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

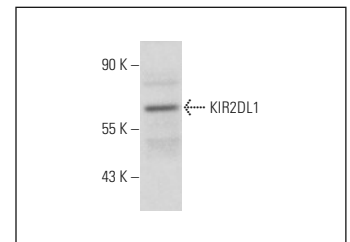
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



KIR2DL1 (JJ C11.6): sc-53595. Western blot analysis of human recombinant KIR2DL1.



KIR2DL1 (JJ C11.6): sc-53595. Western blot analysis of KIR2DL1 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

- Quan, X. and Yang, X. 2017. Correlation between unexplained recurrent spontaneous abortion with CD4⁺ CD25⁺ regulatory T-cell and killer cell immunoglobulin-like receptor levels. *Exp. Ther. Med.* 14: 1459-1462.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.