

NKG2-D (C7): sc-23890

BACKGROUND

The activity of natural killer (NK) cells is regulated by members of multiple receptor families that recognize class I MHC molecules, such as the killer cell inhibitory receptor/leukocyte immunoglobulin-like receptor (KIR/LIR) family and the C-type lectin superfamily. The KIR/LIR family includes p91A (also designated pp130 or PIR-B, for paired immunoglobulin-like receptor-B) and p91B (also designated PIR-A). p91A acts as an inhibitory receptor through interactions with SHP-1, whereas p91B acts as an activating receptor. CD94, NKG2 and Ly-49 are members of the C-type lectin superfamily of type II membrane glycoproteins. CD94 forms heterodimers with NKG2 isoforms on the surface of NK cells, whereas Ly-49 isoforms form homodimers. NKG2-D, expressed on NK cells, $\gamma\delta$ T cells and CD8⁺ $\alpha\beta$ T cells, is a receptor for the stress inducible protein MICA, an antigen frequently expressed in epithelial tumors.

REFERENCES

1. Long, E.O. and Wagtmann, N. 1997. Natural killer cell receptors. *Curr. Opin. Immunol.* 9: 344-350.
2. Moretta, A. and Moretta, L. 1997. HLA class I specific inhibitory receptors. *Curr. Opin. Immunol.* 9: 694-701.
3. Hayami, K., Fukuta, D., Nishikawa, Y., Yamashita, Y., Inui, M., Ohyama, Y., Hikida, M., Ohmori, H. and Takai, T. 1997. Molecular cloning of a novel murine cell-surface glycoprotein homologous to killer cell inhibitory receptors. *J. Biol. Chem.* 272: 7320-7327.
4. Ryan, J.C. and Seaman, W.E. 1997. Divergent functions of lectin-like receptors on NK cells. *Immunol. Rev.* 155: 79-89.
5. Vance, R.E., Tanamachi, D.M., Hanke, T. and Raulet D.H. 1997. Cloning of a mouse homolog of CD94 extends the family of C-type lectins on murine natural killer cells. *Eur. J. Immunol.* 27: 3236-3241.
6. Berg, K.L., Carlberg, K., Rohrschneider, L.R., Siminovitch, K.A. and Stanley, E.R. 1998. The major SHP-1-binding, tyrosine-phosphorylated protein in macrophages is a member of the KIR/LIR family and an SHP-1 substrate. *Oncogene* 17: 2535-2541.
7. Salcedo, M. 1999. Inhibitory role of murine Ly49 lectin-like receptors on natural killer cells. *Curr. Top. Microbiol. Immunol.* 244: 97-105.
8. Bauer, S., Groh, V., Wu, J., Steinle, A., Phillips, J.H., Lanier, L.L. and Spies, T. 1999. Activation of NK cells and T cells by NKG2-D, a receptor for stress-inducible MICA. *Science* 285: 727-729.

CHROMOSOMAL LOCATION

Genetic locus: Klrk1 (mouse) mapping to 6 F3.

SOURCE

NKG2-D (C7) is an Armenian hamster monoclonal antibody raised against the ectodomain of recombinant NKG2-D of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking the receptor, sc-23890 L, 200 μ g/0.1 ml.

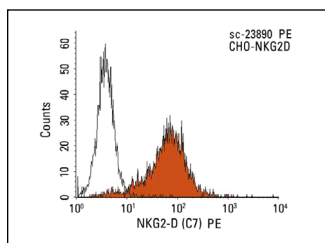
APPLICATIONS

NKG2-D (C7) is recommended for detection of NKG2-D of mouse origin by flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for NKG2-D siRNA (m): sc-42949, NKG2-D shRNA Plasmid (m): sc-42949-SH and NKG2-D shRNA (m) Lentiviral Particles: sc-42949-V.

Molecular Weight of NKG2-D: 42 kDa.

DATA



NKG2-D (C7) PE: sc-23890 PE. FCM analysis of NKG2-D transfected CHO cells. Black line histogram represents the isotype control, normal Armenian hamster IgG-PE: sc-2875.

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.