SANTA CRUZ BIOTECHNOLOGY, INC.

# NKG2-D (A10): sc-23891

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 (A10) is a hamster monoclonal antibody raised against ectodomain of recombinant NKG2D 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for stimulating the receptor, sc-23891 L, 200 µg/0.1 ml.

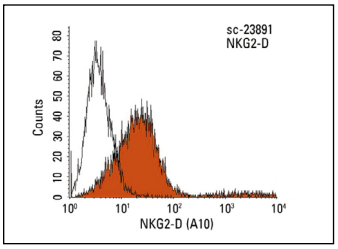
## APPLICATIONS

NKG2-D (A10) is recommended for detection of NKG2-D of mouse origin by flow cytometry (1 µg per 1 x $10^6$ cells).

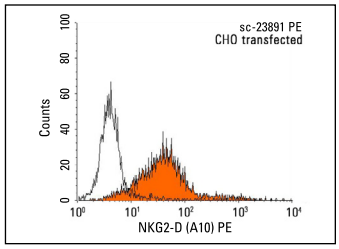
Suitable for use as control antibody for NKG2-D siRNA (m): sc-42949, NKG2-D shRNA Plasmid (m): sc-42949-SH and NKG2-D shRNA (m) Lentiviral Particles: sc-42949-V.

Molecular Weight of NKG2-D: 42 kDa.

## DATA




NKG2-D (A10): sc-23891. Indirect FCM analysis of CHO-NKG2-D cells stained with NKG2-D (A10), followed by PE-conjugated mouse anti-Armenian hamster IgG-R: sc-3944. Black line histogram represents the isotype control, normal Armenian hamster IgG: sc-3886.




NKG2-D (A10): sc-23891. Indirect FCM analysis of CHO-NKG2-D cells stained with NKG2-D (A10), followed by PE-conjugated goat anti-Armenian hamster IgG-PE: sc-3733. Black line histogram represents the isotype control, normal Armenian hamster IgG: sc-3886.

## SELECT PRODUCT CITATIONS


1. Uddin, M.B., Roy, K.R., Hill, R.A., Roy, S.C., Gu, X., Li, L., Zhang, Q.J., You, Z. and Liu, Y.Y. 2022. p53 missense mutant G242A subverts natural killer cells in sheltering mouse breast cancer cells against immune rejection. Exp. Cell Res. 417: 113210.


## 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.