

# NKG2-A (16A11): sc-53025

## BACKGROUND

The activity of natural killer (NK) cells are 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<sup>+</sup>  $\alpha\beta$  T cells, is a receptor for the stress inducible protein MICA, an antigen frequently expressed in epithelial tumors.

## REFERENCES

1. Long, E.O., et al. 1997. Natural killer cell receptors. *Curr. Opin. Immunol.* 9: 344-350.
2. Moretta, A., et al. 1997. HLA class I specific inhibitory receptors. *Curr. Opin. Immunol.* 9: 694-701.
3. Hayami, K., et al. 1997. Molecular cloning of a novel murine cell-surface glycoprotein homologous to killer cell inhibitory receptors. *J. Biol. Chem.* 272: 7320-7327.
4. Vance, R.E., et al. 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.
5. Ryan, J.C., et al. 1997. Divergent functions of lectin-like receptors on NK cells. *Immunol. Rev.* 155: 79-89.
6. Berg, K.L., et al. 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 Ly-49 lectin-like receptors on natural killer cells. *Curr. Top. Microbiol. Immunol.* 244: 97-105.
8. Bauer, S., et al. 1999. Activation of NK cells and T cells by NKG2D, a receptor for stress-inducible MICA. *Science* 285: 727-729.

## CHROMOSOMAL LOCATION

Genetic locus: Klrc1 (mouse) mapping to 6 F3.

## SOURCE

NKG2-A (16A11) is a mouse monoclonal antibody raised against NKG2-A receptor 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  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NKG2-A (16A11) is available conjugated to agarose (sc-53025 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53025 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53025 PE), fluorescein (sc-53025 FITC), Alexa Fluor® 488 (sc-53025 AF488), Alexa Fluor® 546 (sc-53025 AF546), Alexa Fluor® 594 (sc-53025 AF594) or Alexa Fluor® 647 (sc-53025 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53025 AF680) or Alexa Fluor® 790 (sc-53025 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NKG2-A (16A11) is recommended for detection of NKG2-A of mouse origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); non cross-reactive with NKG2-C or NKG2-E.

Suitable for use as control antibody for NKG2-A siRNA (m): sc-61849, NKG2-A shRNA Plasmid (m): sc-61849-SH and NKG2-A shRNA (m) Lentiviral Particles: sc-61849-V.

Molecular Weight of NKG2-A: 31-43 kDa.

## SELECT PRODUCT CITATIONS

1. Wang, X., et al. 2012. Activated mouse CD4<sup>+</sup>Foxp3<sup>+</sup> T cells facilitate melanoma metastasis via Qa-1-dependent suppression of NK-cell cytotoxicity. *Cell Res.* 22: 1696-1706.

## 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) for detailed protocols and support products.