

# NKG2-D (A-7): sc-515599

## 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<sup>+</sup>  $\alpha\beta$  T cells, is a receptor for the stress inducible protein MICA, an antigen frequently expressed in epithelial tumors.

## REFERENCES

- Long, E.O. and Wagtmann, N. 1997. Natural killer cell receptors. *Curr. Opin. Immunol.* 9: 344-350.
- Moretta, A. and Moretta, L. 1997. HLA class I specific inhibitory receptors. *Curr. Opin. Immunol.* 9: 694-701.
- 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.
- 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.
- Ryan, J.C. and Seaman, W.E. 1997. Divergent functions of lectin-like receptors on NK cells. *Immunol. Rev.* 155: 79-89.
- 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.
- Salcedo, M. 1999. Inhibitory role of murine Ly49 lectin-like receptors on natural killer cells. *Curr. Top. Microbiol. Immunol.* 244: 97-105.

## CHROMOSOMAL LOCATION

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

## SOURCE

NKG2-D (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 17-37 near the N-terminus of NKG2-D of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-515599 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

NKG2-D (A-7) is recommended for detection of NKG2-D of mouse and rat origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

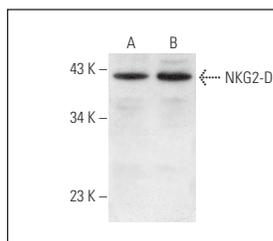
Molecular Weight of NKG2-D: 42 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189 or NIH/3T3 whole cell lysate: sc-2210.

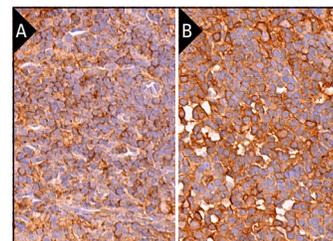
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NKG2-D (A-7): sc-515599. Western blot analysis of NKG2-D expression in LADMAC (A) and NIH/3T3 (B) whole cell lysates.



NKG2-D (A-7): sc-515599. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node (A) and rat lymph node (B) tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center.

## 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.