



CD94 (6A343): sc-70815

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

- 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., 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.
- Ryan, J.C. and Seaman, W.E. 1997. Divergent functions of lectin-like receptors on NK cells. *Immunol. Rev.* 155: 79-89.
- 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.
- 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.
- Salcedo, M. 1999. Inhibitory role of murine Ly-49 lectin-like receptors on natural killer cells. *Curr. Top. Microbiol. Immunol.* 244: 97-105.
- 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 NKG2D, a receptor for stress-inducible MICA. *Science* 285: 727-729.
- Vance, R.E., Jamieson, A.M. and Raulet, D.H. 1999. Recognition of the class Ib molecule Qa-1 b by putative activating receptors CD94/NKG2C and CD94/NKG2E on mouse natural killer cells. *J. Exp. Med.* 190: 1801-1812.

CHROMOSOMAL LOCATION

Genetic locus: Klr1d1 (mouse) mapping to 6 F3.

SOURCE

CD94 (6A343) is a rat monoclonal antibody raised against B6 allele of CD94 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG $_{2a}$ in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

CD94 (6A343) is available conjugated to either phycoerythrin (sc-70815 PE) or fluorescein (sc-70815 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD94 (6A343) is recommended for detection of CD94 of mouse origin by flow cytometry (1 μ g per 1×10^6 cells).

Suitable for use as control antibody for CD94 siRNA (m): sc-42934, CD94 shRNA Plasmid (m): sc-42934-SH and CD94 shRNA (m) Lentiviral Particles: sc-42934-V.

Molecular Weight of CD94: 30 kDa.

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.