

# Ly-49 (14B11): sc-53022



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. There are at least 21 Ly-49 proteins, ranging from 230 to 280 amino acids in length. The Ly-49 isoforms, which are clustered on human chromosome 16, all function to present the C-type lectin domain on the cell membrane. 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

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5. Takei, F., et al. 1997. The Ly-49 family: genes, proteins and recognition of class I MHC. *Immunol. Rev.* 155: 67-77.
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## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: Klra3/Klra6/Klra8/Klra21 (mouse) mapping to 6 F3.

## SOURCE

Ly-49 (14B11) is a Syrian hamster monoclonal antibody raised against Ly-49 of mouse origin.

## PRODUCT

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

Ly-49 (14B11) is available conjugated to either phycoerythrin (sc-53022 PE) or fluorescein (sc-53022 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

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## APPLICATIONS

Ly-49 (14B11) is recommended for detection of Ly-49C, Ly-49F, Ly-49H and Ly-49I of mouse origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Molecular Weight of Ly-49: 31 kDa.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.