

Ly-6A/E (D7): sc-52601

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 Ly-6 alloantigens represent a family of phosphatidylinositol anchored proteins that play a role in the process of T lymphocyte activation. Ly-6 expression is commonly induced on T and B lymphocytes after activation by mitogens. Ly-6A/E is a phosphatidylinositol-linked transmembrane member of the Ly-6 family that is produced in humans after four weeks of age. γ -interferon and TNF regulate Ly-6A/E at the level of transcription and mRNA stabilization in certain thymocytes and T cells.

REFERENCES

- Ortega, G., et al. 1986. Role of Ly-6 in lymphocyte activation. I. Characterization of a monoclonal antibody to a nonpolymorphic Ly-6 specificity. *J. Immunol.* 137: 3240-3246.
- Palfrey, R.G., et al. 1986. Ly-6A.2 and Ly-6E.1 molecules are antithetical and identical to MALA-1. *Immunogenetics* 23: 197-207.
- Codias, E.K., et al. 1989. Expression of Ly-6A/E alloantigens in thymocyte and T-lymphocyte subsets: variability related to the Ly-6A and Ly-6B haplotypes. *Immunogenetics* 29: 98-107.
- Malek, T.R., et al. 1989. Tumor necrosis factor synergistically acts with IFN- γ to regulate Ly-6A/E expression in T lymphocytes, thymocytes and bone marrow cells. *J. Immunol.* 142: 1929-1936.
- Codias, E.K. and Malek, T.R. 1990. Regulation of B lymphocyte responses to IL-4 and IFN- γ by Ly-6A/E molecules. *J. Immunol.* 144: 2197-2204.
- Rock, K.L., et al. 1990. The Ly-6 locus: a multigene family encoding phosphatidylinositol-anchored membrane proteins concerned with T cell activation. *Immunol. Rev.* 111: 195-224.

CHROMOSOMAL LOCATION

Genetic locus: Ly6a (mouse) mapping to 15 D3.

SOURCE

Ly-6A/E (D7) is a rat monoclonal antibody raised against Ly-6A/E of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ly-6A/E (D7) is available conjugated to agarose (sc-52601 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-52601 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-52601 PE), fluorescein (sc-52601 FITC), Alexa Fluor[®] 488 (sc-52601 AF488), Alexa Fluor[®] 546 (sc-52601 AF546), Alexa Fluor[®] 594 (sc-52601 AF594) or Alexa Fluor[®] 647 (sc-52601 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-52601 AF680) or Alexa Fluor[®] 790 (sc-52601 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

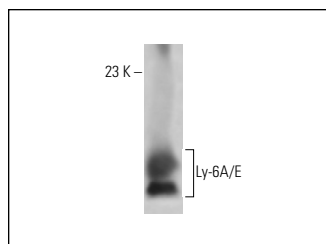
Ly-6A/E (D7) is recommended for detection of Ly-6A/E of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for Ly-6A/E siRNA (m): sc-72121, Ly-6A/E shRNA Plasmid (m): sc-72121-SH and Ly-6A/E shRNA (m) Lentiviral Particles: sc-72121-V.

Molecular Weight of Ly-6A/E: 14 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

DATA



Ly-6A/E (D7): sc-52601. Western blot analysis of Ly-6A/E expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

- Fukuishi, N., et al. 2013. Generation of mast cells from mouse fetus: analysis of differentiation and functionality, and transcriptome profiling using next generation sequencer. *PLoS ONE* 8: e60837.
- Sasi, S.P., et al. 2014. TNF-TNFR2/p75 signaling inhibits early and increases delayed nontargeted effects in bone marrow-derived endothelial progenitor cells. *J. Biol. Chem.* 289: 14178-14193.
- Xie, D., et al. 2018. Cardiac Nestin⁺ cells derived from early stage of dilated cardiomyopathy enhanced the survival of the doxorubicin-injured cardiac muscle HL-1 cells. *Int. Heart J.* 59: 180-189.
- Wei, Y., et al. 2021. The critical role of hedgehog-responsive mesenchymal progenitors in meniscus development and injury repair. *Elife* 10: e62917.
- Shen, Z., et al. 2023. Expansion of macrophage and liver sinusoidal endothelial cell subpopulations during non-alcoholic steatohepatitis progression. *iScience* 26: 106572.

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.