

Ly-6G (Y-11): sc-103603

BACKGROUND

Ly-6G (Lymphocyte antigen 6G) belongs to the Ly-6 family of glycosyl-phosphatidylinositol (GPI)-linked proteins. Ly-6 family members share amino acid homology throughout a distinctive cysteine rich protein domain that incorporates O-linked carbohydrates. Murine Ly-6 molecules have unique patterns of tissue expression during hematopoiesis from multipotential stem cells to lineage committed precursor cells, and on specific leukocyte subpopulations in the peripheral lymphoid tissues. Ly-6G contains one UPAR/Ly6 domain and is expressed almost exclusively on neutrophils localizing to the cell membrane. Ly-6G together with Ly-6C make up the Gr-1 antigen. The Gr-1 antigen is expressed on monocytes, neutrophils and a subset of macrophages, plasmacytoid dendritic cells and T cells. Cells expressing Gr-1 may play a role in the suppression of antitumor and T cell responses. Ly-6G is commonly used as a surface marker for neutrophils.

REFERENCES

1. Fleming, T.J., O'Uigin, C. and Malek, T.R. 1993. Characterization of two novel Ly-6 genes. Protein sequence and potential structural similarity to α -bungarotoxin and other neurotoxins. *J. Immunol.* 150: 5379-5390.
2. Fleming, T.J., Fleming, M.L. and Malek, T.R. 1993. Selective expression of Ly-6G on myeloid lineage cells in mouse bone marrow. RB6-8C5 mAb to granulocyte-differentiation antigen (Gr-1) detects members of the Ly-6 family. *J. Immunol.* 151: 2399-2408.
3. Nagendra, S. and Schlueter, A.J. 2004. Absence of cross-reactivity between murine Ly-6C and Ly-6G. *Cytometry A* 58: 195-200.
4. Zehntner, S.P., Brickman, C., Bourbonnière, L., Remington, L., Caruso, M. and Owens, T. 2005. Neutrophils that infiltrate the central nervous system regulate T cell responses. *J. Immunol.* 174: 5124-5131.
5. Su, Y., Raghuvanshi, S.K., Yu, Y., Nanney, L.B., Richardson, R.M. and Richmond, A. 2005. Altered CXCR2 signaling in β -Arrestin-2-deficient mouse models. *J. Immunol.* 175: 5396-5402.
6. Nelson, A.L., Roche, A.M., Gould, J.M., Chim, K., Ratner, A.J. and Weiser, J.N. 2006. Capsule enhances pneumococcal colonization by limiting mucus-mediated clearance. *Infect. Immun.* 75: 83-90.

CHROMOSOMAL LOCATION

Genetic locus: Ly6g (mouse) mapping to 15 D3.

SOURCE

Ly-6G (Y-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Ly-6G of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-103603 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ly-6G (Y-11) is recommended for detection of Ly-6G of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 Ly-6G siRNA (m): sc-106187, Ly-6G shRNA Plasmid (m): sc-106187-SH and Ly-6G shRNA (m) Lentiviral Particles: sc-106187-V.

Molecular Weight of Ly-6G: 16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Zhang, Q., Liu, S., Zhang, Q., Xiong, Z., Wang, A.R., Myers, L., Melamed, J., Tang, W.W. and You, Z. 2014. Interleukin-17 promotes development of castration-resistant prostate cancer potentially through creating an immunotolerant and pro-angiogenic tumor microenvironment. *Prostate* 74: 869-879.

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 or our catalog for detailed protocols and support products.



MONOS
Satisfaction
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Try **Ly-6G (RB6-8C5): sc-53515**, our highly recommended monoclonal alternative to Ly-6G (Y-11).