SANTA CRUZ BIOTECHNOLOGY, INC.

RP105 (G28.8): sc-73648

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

RP105 is a mouse B cell surface molecule that transmits a growth-promoting signal and is implicated in the life/death decision of B cells. RP105 has tandem repeats of a leucine-rich motif in its extracellular domain that are presumed to be involved in protein-protein interactions. The amino acid sequence of human RP105 is highly homologous to that of mouse RP105; human RP105 shares 74% identity with the mouse protein, as well as the leucine-rich motif. Surface expression of RP105 is enhanced in the presence of MD-1, although this expression is restricted to CD19-positive B cells. RP105 demonstrates predominant expression on mature B cells in mantle zones; very little expression is observed in germinal centers.

REFERENCES

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2. Miura, Y., et al. 1996. Molecular cloning of a human RP105 homologue and chromosomal localization of the mouse and human RP105 genes (Ly64 and LY64). Genomics 38: 299-304.
3. Rock, F.L., et al. 1998. A family of human receptors structurally related to *Drosophila* toll. Proc. Natl. Acad. Sci. USA 95: 588-593.
4. Miura, Y., et al. 1998. RP105 is associated with MD-1 and transmits an activation signal in human B cells. Blood 92: 2815-2822.
5. Miyake, K., et al. 1998. Mouse MD-1, a molecule that is physically associated with RP105 and positively regulates its expression. J. Immunol. 161: 1348-1353.
6. Brightbill, H.D., et al. 1999. Host defense mechanisms triggered by microbial lipoproteins through toll-like receptors. Science 285: 732-736.
7. Medzhitov, R., et al. 2000. A human homologue of the *Drosophila* toll protein signals activation of adaptive immunity. Nature 388: 394-397.
8. Chuang, T.H., et al. 2000. Cloning and characterization of a sub-family of human toll-like receptors: hTLR7, hTLR8, hTLR9. Eur. Cytokine Netw. 11: 372-378.
9. Miyake, K., et al. 2000. Innate recognition of lipopolysaccharide by toll-like receptor 4/MD-2 and RP105/MD-1. J. Endotoxin Res. 6: 389-391.

CHROMOSOMAL LOCATION

Genetic locus: CD180 (human) mapping to 5q12.3.

SOURCE

RP105 (G28.8) is a mouse monoclonal antibody raised against RP105 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for induces calcium mobilization and B cell activation, sc-73648 L, 200 µg/0.1 ml.

APPLICATIONS

RP105 (G28.8) is recommended for detection of RP105, with specificity to a distinct 95 kDa surface glycoprotein, designated Bgp95, found on follicular-mantle B cells of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells); not recommended for detection of RP105 of germinal center B cells.

Suitable for use as control antibody for RP105 siRNA (h): sc-72150, RP105 shRNA Plasmid (h): sc-72150-SH and RP105 shRNA (h) Lentiviral Particles: sc-72150-V.

Molecular Weight of RP105: 95-105 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

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.