

PSGL-1 (HECA-452): sc-53514

BACKGROUND

PSGL-1 (P-Selectin glycoprotein ligand, also designated CD162), exists as a disulfide-linked homodimer. PSGL-1 is a type 1 membrane protein that localizes on the tips of microvilli of leukocytes. Its extracellular domain is rich in serines, threonines and prolines, and includes a series of 15 and 16 decameric repeats in HL-60 and U-937 cells, and human leukocytes, respectively. Although PSGL-1 appears to be the sole receptor for P-Selectin on human hematopoietic cells, it also interacts with E-Selectin through a unique binding site. In order to bind PSGL-1 to either E-Selectin or P-Selectin, PSGL-1 must be sialylated and fucosylated. PSGL-1 is a mucin-like molecule, much like leukosialin (CD43), CD164 and CD34. These proteins belong to an emerging family of cell adhesion receptors called sialomucins, which transduce negative signals in hematopoietic cells.

REFERENCES

- Moore, K., et al. 1992. Identification of a specific glycoprotein ligand for P-selectin (CD62) on myeloid cells. *J. Biol. Chem.* 118: 445-456.
- Sako, D., et al. 1993. Expression cloning of a functional glycoprotein ligand for P-selectin. *Cell* 75: 1179-1186.
- Veldman, G., et al. 1995. Genomic organization and chromosomal localization of the gene encoding human P-selectin glycoprotein ligand. *J. Biol. Chem.* 270: 16470-16475.
- Patel, K., et al. 1995. Neutrophils use both shared and distinct mechanisms to adhere to selectins under static and flow conditions. *J. Clin. Invest.* 96: 1887-1896.
- Li, F., et al. 1996. Visualization of P-selectin glycoprotein ligand-1 as a highly extended molecule and mapping of protein epitopes for monoclonal antibodies. *J. Biol. Chem.* 271: 6342-6348.
- Levesque, J.P., et al. 1999. PSGL-1-mediated adhesion of human hematopoietic progenitors to P-selectin results in suppression of hematopoiesis. *Immunity* 11: 369-378.

CHROMOSOMAL LOCATION

Genetic locus: SELPLG (human) mapping to 12q24.11; Selplg (mouse) mapping to 5 F.

SOURCE

PSGL-1 (HECA-452) is a rat monoclonal antibody raised against skin-homing memory cells of human origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSGL-1 (HECA-452) is available conjugated to either phycoerythrin (sc-53514 PE) or fluorescein (sc-53514 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

PSGL-1 (HECA-452) is recommended for detection of PSGL-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); also recommended for detection of skin-homing memory T cells, binding to the T cell carbohydrate ligand for vascular E-selectin. Recognizes sialyl Lewisx and sialyl Lewis a and other carbohydrate ligands for E-selectin, and E-selectin-binding epitopes of high endothelial venules.

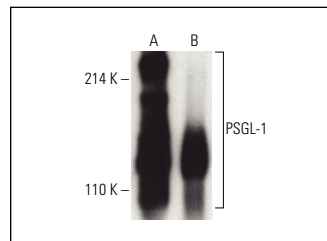
Suitable for use as control antibody for PSGL-1 siRNA (h): sc-36323, PSGL-1 siRNA (m): sc-42833, PSGL-1 shRNA Plasmid (h): sc-36323-SH, PSGL-1 shRNA Plasmid (m): sc-42833-SH, PSGL-1 shRNA (h) Lentiviral Particles: sc-36323-V and PSGL-1 shRNA (m) Lentiviral Particles: sc-42833-V.

Molecular Weight of PSGL-1 monomer: 120 kDa.

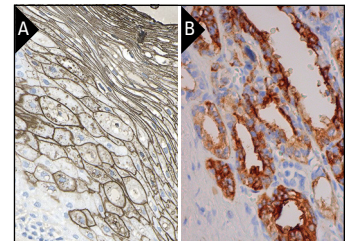
Molecular Weight of PSGL-1 homodimer: 240 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182.

DATA



PSGL-1 (HECA-452): sc-53514. Western blot analysis of PSGL-1 expression in AML-193 (A) and human PBL (B) whole cell lysates. Detection reagent used: anti-rat IgM-HRP.



PSGL-1 (HECA-452): sc-53514. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing membrane staining of squamous epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Tan, H., et al. 2021. Platelet-like fusogenic liposome-mediated targeting delivery of miR-21 improves myocardial remodeling by reprogramming macrophages post myocardial ischemia-reperfusion injury. *Adv. Sci.* 8: e2100787.

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.