SANTA CRUZ BIOTECHNOLOGY, INC.

PSGL-1 (PL1): sc-18855

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. PSLG-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

1. Moore, K., et al. 1992. Identification of a specific glycoprotein ligand for P-Selectin (CD62) on myeloid cells. J. Biol. Chem. 118: 445-456.
2. Sako, D., et al. 1993. Expression cloning of a functional glycoprotein ligand for P-Selectin. Cell 75: 1179-1186.

CHROMOSOMAL LOCATION

Genetic locus: SELPLG (human) mapping to 12q24.11.

SOURCE

PSGL-1 (PL1) is a mouse monoclonal antibody raised against an epitope mapping near the P-Selectin binding site of PSGL-1 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 blocking of P-Selectin binding, sc-18855 L, 200 µg/0.1 ml.

PSGL-1 (PL1) is available conjugated to either phycoerythrin (sc-18855 PE) or fluorescein (sc-18855 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

PSGL-1 (PL1) is recommended for detection of PSGL-1 of 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 10^6 cells).

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

Molecular Weight of PSGL-1 monomer: 120 kDa.

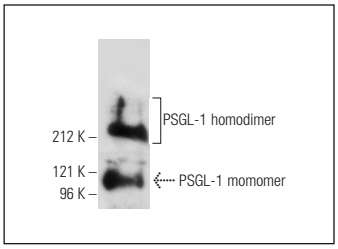
Molecular Weight of PSGL-1 homodimer: 240 kDa.

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

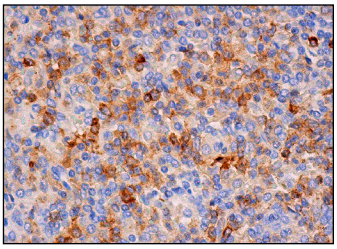
STORAGE

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

DATA



PSGL-1 (PL1): sc-18855. Western blot analysis of PSGL-1 expression in AML-193 whole cell lysate.



PSGL-1 (PL1): sc-18855. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Komai, Y. and Schmid-Schönbein, G.W. 2005. De-activation of neutrophils in suspension by fluid shear stress: a requirement for erythrocytes. Ann. Biomed. Eng. 33: 1375-1386.
2. Chen, W., et al. 2008. Monitoring receptor-ligand interactions between surfaces by thermal fluctuations. Biophys. J. 94: 694-701.
3. Barbaux, S., et al. 2010. The adhesion mediated by the P-Selectin P-Selectin glycoprotein ligand-1 (PSGL-1) couple is stronger for shorter PSGL-1 variants. J. Leukoc. Biol. 87: 727-734.
4. Ali, M.F., et al. 2012. Golgi phosphoprotein 3 determines cell binding properties under dynamic flow by controlling Golgi localization of core 2 N-acetylglucosaminyltransferase 1. J. Biol. Chem. 287: 39564-39577.
5. Umeki, S., et al. 2013. Anti-adhesive property of P-Selectin glycoprotein ligand-1 (PSGL-1) due to steric hindrance effect. J. Cell. Biochem. 114: 1271-1285.
6. Tong, H., et al. 2014. Inhibition of inflammatory injure by polysaccharides from *Bupleurum chinense* through antagonizing P-Selectin. Carbohydr. Polym. 105: 20-25.
7. Tong, H., et al. 2015. Inhibitory function of P-Selectin-mediated leukocyte adhesion by the polysaccharides from *Sanguisorba officinalis*. Pharm. Biol. 53: 345-349.
8. Gong, Y., et al. 2017. Dynamic contributions of P- and E-selectins to β2-integrin-induced neutrophil transmigration. FASEB J. 31: 212-223.
9. Tong, H., et al. 2018. Characterization of a P-Selectin-binding moiety from *Bupleurum chinense* polysaccharide and its antagonistic effect against P-Selectin-mediated function. Carbohydr. Polym. 196: 110-116.

RESEARCH USE

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