

PSGL-1 (KPL1): sc-13535

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 ecameric 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.

CHROMOSOMAL LOCATION

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

SOURCE

PSGL-1 (KPL1) is a mouse monoclonal antibody raised against amino acids 5-11 of PSGL-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for neutralizing, sc-13535 L, 200 µg/0.1 ml.

PSGL-1 (KPL1) is available conjugated to agarose (sc-13535 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13535 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13535 PE), fluorescein (sc-13535 FITC), Alexa Fluor® 488 (sc-13535 AF488), Alexa Fluor® 546 (sc-13535 AF546), Alexa Fluor® 594 (sc-13535 AF594) or Alexa Fluor® 647 (sc-13535 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13535 AF680) or Alexa Fluor® 790 (sc-13535 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PSGL-1 (KPL1) 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 10⁶ 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.

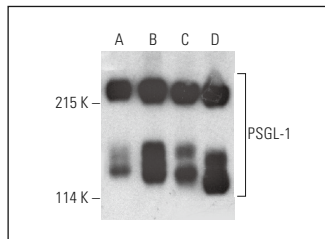
Molecular Weight of PSGL-1 homodimer: 240 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or MOLT-4 cell lysates: sc-2233.

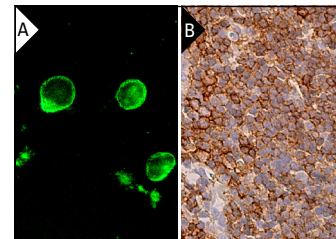
STORAGE

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

DATA



PSGL-1 (KPL1) HRP: sc-13535 HRP. Direct western blot analysis of PSGL-1 expression in MOLT-4 (A), AML-193 (B), Jurkat (C) and CCRF-CEM (D) whole cell lysates.



PSGL-1 (KPL1): sc-13535. Immunofluorescence staining of methanol-fixed CCRF-CEM cells showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Wei, M., et al. 2004. Modified heparin inhibits P-Selectin-mediated cell adhesion of human colon carcinoma cells to immobilized platelets under dynamic flow conditions. *J. Biol. Chem.* 279: 29202-29210.
- Posner, M.G., et al. 2016. Extracellular fibrinogen-binding protein (Efb) from *Staphylococcus aureus* inhibits the formation of platelet-leukocyte complexes. *J. Biol. Chem.* 291: 2764-2776.
- Connor, R., et al. 2017. Frontline science: c-Myc regulates P-Selectin glycoprotein ligand-1 expression in monocytes during HIV-1 infection. *J. Leukoc. Biol.* 102: 953-964.
- Luo, J. 2018. PI3K is a linker between L-Selectin and PSGL-1 signaling to IL-18 transcriptional activation at the promoter level. *Inflammation* 41: 555-561.
- Dong, X., et al. 2019. Neutrophil membrane-derived nanovesicles alleviate inflammation to protect mouse brain injury from ischemic stroke. *ACS Nano* 13: 1272-1283.
- Liu, Y., et al. 2020. PSGL-1 inhibits HIV-1 infection by restricting Actin dynamics and sequestering HIV envelope proteins. *Cell Discov.* 6: 53.
- Belmonte, B., et al. 2021. Constitutive PSGL-1 correlates with CD30 and TCR pathways and represents a potential target for immunotherapy in anaplastic large T-cell lymphoma. *Cancers* 13: 2958.
- Gao, J., et al. 2023. Remote co-loading of amphipathic acid drugs in neutrophil nanovesicles infilled with cholesterol mitigates lung bacterial infection and inflammation. *Biomaterials* 296: 122071.

RESEARCH USE

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

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