

# 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 IgG<sub>1</sub> 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 10<sup>6</sup> 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.

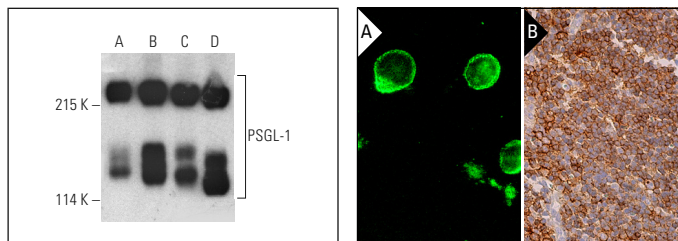
Molecular Weight of PSGL-1 homodimer: 240 kDa.

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.
- Xu, T., et al. 2015. Lipid raft-associated  $\beta$ -adducin is required for PSGL-1-mediated neutrophil rolling on P-selectin. *J. Leukoc. Biol.* 97: 297-306.
- 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.
- Liu, W., et al. 2019. RhoGDI2 positively regulates the Rho GTPases activation in response to the  $\beta$ 2 outside-in signaling in T cells adhesion and migration on ICAM-1. *J. Leukoc. Biol.* 106: 431-446.
- 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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