

PRODUCT INFORMATION

P-Selectin Glycoprotein Ligand-1/CD162 Extracellular Domain (human, recombinant; His-tagged)

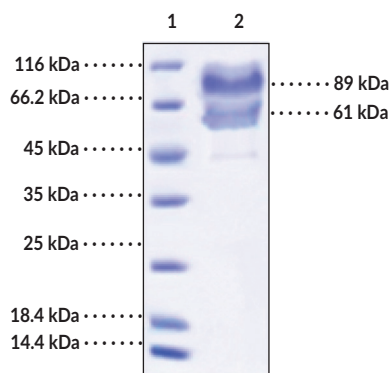
Item No. 38072

Overview and Properties

Synonyms:	CD162, Cluster Of Differentiation 162, PSGL-1, Selectin P Ligand, SELPLG
Source:	Recombinant human C-terminal His-tagged PSGL-1 expressed in HEK293 cells
Amino Acids:	18-295
Uniprot No.:	Q14242-1
Molecular Weight:	30.5 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers

Lane 2: PSGL-1/CD162 Extracellular Domain (human, recombinant; His-tagged)

SDS-PAGE Analysis of PSGL-1/CD162 Extracellular Domain (human, recombinant; His-tagged). This protein has a calculated molecular weight of 30.5 kDa. It has an apparent molecular weight of approximately 89 or 61 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

P-selectin glycoprotein ligand 1 (PSGL-1), also known as CD162, is a cell surface glycoprotein encoded by *SELPLG* in humans that binds to P-, E-, and L-selectins to mediate the rolling and tethering of immune cells on endothelium for migration into sites of inflammation.¹⁻³ It is expressed as a homodimer on myeloid and lymphoid cells, including platelets, and is composed of an extracellular domain, which contains branching sites for glycosylation and sulfation, a transmembrane domain, and a cytoplasmic domain.² PSGL-1 selectin binding requires post-translational modifications, including sulfation and glycosylation, and these modifications are constitutively present on PSGL-1 in innate immune cells and differentiated T cells.⁴ Ectopic expression of PSGL-1 in CD4⁺ T cells inhibits processing and incorporation of the HIV-1 envelope glycoprotein, disrupting attachment of viral progeny to target cells but does not inhibit HIV-1 infection.⁵ It also inhibits the incorporation of severe acute respiratory syndrome coronavirus (SARS-CoV) and SARS-CoV-2 spike glycoproteins into pseudovirions and blocks pseudovirus attachment and infection of target cells.³ Cayman's PSGL-1 (human, recombinant; His-tagged) protein consists of 289 amino acids, has a calculated molecular weight of 30.5 kDa, and a predicted N-terminus of Leu18 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is approximately 89 or 61 kDa due to glycosylation.

References

1. Carlow, D.A., Gossens, K., Naus, S., *et al.* PSGL-1 function in immunity and steady state homeostasis. *Immunol. Rev.* **230**(1), 75-96 (2009).
2. Tinoco, R., Otero, D.C., Takahashi, A.A., *et al.* PSGL-1: A new player in the immune checkpoint landscape. *Trends Immunol.* **38**(5), 323-335 (2017).
3. He, S., Waheed, A.A., Hetrick, B., *et al.* PSGL-1 inhibits the incorporation of SARS-CoV and SARS-CoV-2 spike glycoproteins into pseudovirions and impairs pseudovirus attachment and infectivity. *Viruses* **13**(1), 46 (2020).
4. Tinoco, R., Neubert, E.N., Stairiker, C.J., *et al.* PSGL-1 is a T cell intrinsic inhibitor that regulates effector and memory differentiation and responses during viral infection. *Front. Immunol.* **12**, 677824 (2021).
5. Fu, Y., He, S., Waheed, A.A., *et al.* PSGL-1 restricts HIV-1 infectivity by blocking virus particle attachment to target cells. *Proc. Natl. Acad. Sci. USA* **117**(17), 9537-9545 (2020).

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