

PRODUCT INFORMATION

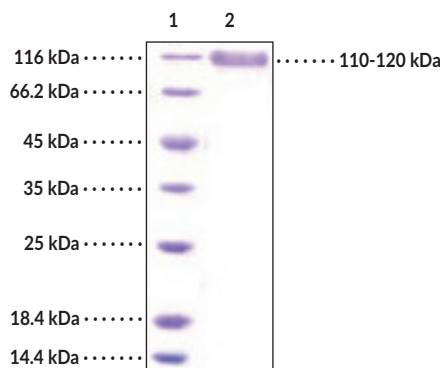
P-Selectin Glycoprotein Ligand-1/CD162 Extracellular Domain (human, recombinant; His- and Fc-tagged)

Item No. 38062

Overview and Properties

Synonyms: CD162, Cluster Of Differentiation 162, PSGL-1, Selectin P Ligand, SELPLG
Source: Recombinant C-terminal human IgG1 Fc-His-tagged PSGL-1 extracellular domain expressed in HEK293 cells
Amino Acids: 18-295
Uniprot No.: Q14242
Molecular Weight: 57.1 kDa
Storage: -80°C (as supplied)
Stability: ≥1 years
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

SDS-PAGE Analysis of PSGL-1/CD162 Extracellular Domain. This protein has a calculated molecular weight of 57.1 kDa. It has an apparent molecular weight of approximately 110-120 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- and Fc-tagged) protein is a disulfide-linked homodimer. The reduced monomer, composed of PSGL-1 (amino acids 18-295) fused to His-tagged human IgG1 Fc at its C-terminus, consists of 526 amino acids, has a calculated molecular weight of 57.1 kDa, and a predicted N-terminus of Leu18 after signal peptide cleavage. As a result of glycosylation, the monomer migrates at approximately 110-120 kDa by SDS-PAGE under reducing conditions.

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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