

# PRODUCT INFORMATION



## P-Selectin/CD62P (human, recombinant)

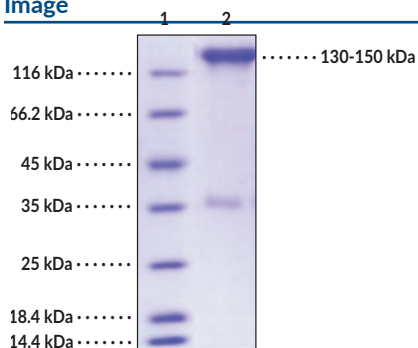
Item No. 35508

### Overview and Properties

<b>Synonyms:</b>	CD62 Antigen-like Family Member P, GMP140, Granule Membrane Protein 140, PADGEM, Platelet Activation-dependent Granule-external Membrane Protein, Platelet-selectin, SELP
<b>Source:</b>	Active recombinant C-terminal human IgG1 Fc-tagged P-selectin expressed in HEK293 cells
<b>Amino Acids:</b>	42-771
<b>Uniprot No.:</b>	P16109
<b>Molecular Weight:</b>	107 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Purity:</b>	≥85% estimated by SDS-PAGE
<b>Supplied in:</b>	Lyophilized from sterile PBS, pH 7.4
<b>Endotoxin Testing:</b>	<1.0 EU/μg, determined by the LAL endotoxin assay
<b>Bioactivity:</b>	Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When 50,000 cells/well are added to SELP/Fc Chimera coated plates (10 μg/m with 100 μ/well), >80% of cells will adhere after 1 hour at 37°C.

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

### Image



Lane 1: MW Markers  
Lane 2: P-Selectin/CD62P

**SDS-PAGE Analysis of P-Selectin/CD62P.** This protein has a calculated molecular weight of 107 kDa. It has an apparent molecular weight of approximately 130-150 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  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

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## Description

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P-selectin, also known as CD62P, is a glycoprotein and cell adhesion molecule that is encoded by the *SELP* gene in humans.<sup>1</sup> It is a homodimer and is composed of an N-terminal calcium-dependent lectin domain that recognizes glycoproteins, an EGF-like domain, nine consensus repeats, a transmembrane domain, and an intracellular C-terminal tail. P-selectin is expressed in platelets, endothelial cells, and macrophages, is stored in  $\alpha$ -granules of platelets, and localizes to the plasma membrane upon platelet activation.<sup>1-3</sup> It also exists as a soluble form that results from alternative splicing of *SELP*.<sup>1</sup> P-selectin is involved in tethering and rolling of leukocytes during inflammation and tissue healing mediated by binding to P-selectin glycoprotein ligand-1 (PSGL-1), a mucin expressed on the surface of leukocytes.<sup>1,4</sup> *In vivo*, transgenic mice expressing human *SELP* exhibit neutrophil recruitment in a model of peritonitis induced by thioglycolate.<sup>2</sup> Polymorphisms in *SELP* and serum levels of soluble P-selectin are associated with coronary artery disease.<sup>5</sup> Cayman's P-Selectin/CD62P (human, recombinant) protein can be used for cell-based assays. This protein is a disulfide-linked homodimer. The reduced monomer, composed of P-selectin/CD62P (amino acids 1-771) fused to human IgG1 Fc at its C-terminus, consists of 971 amino acids and has a calculated molecular weight of 107 kDa, and a predicted N-terminus of Trp42 after signal peptide cleavage. As a result of glycosylation, the monomer migrates at approximately 130-150 kDa by SDS-PAGE under reducing conditions.

## References

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2. Liu, Z., Miner, J.J., Yago, T., *et al.* Differential regulation of human and murine P-selectin expression and function in vivo. *J. Exp. Med.* **207**(13), 2975-2987 (2010).
3. Israels, S.J., Gerrard, J.M., Jacques, Y.V., *et al.* Platelet dense granule membranes contain both granulophysin and P-selectin (GMP-140). *Blood* **80**(1), 143-152 (1992).
4. McEver, R.P. Selectins: Initiators of leucocyte adhesion and signalling at the vascular wall. *Cardiovasc. Res.* **107**(3), 331-339 (2015).
5. Barbaux, S.C., Blankenberg, S., Rupprecht, H.J., *et al.* Association between P-selectin gene polymorphisms and soluble P-selectin levels and their relation to coronary artery disease. *Arterioscler. Thromb. Vasc. Biol.* **21**(10), 1668-1673 (2001).

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1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
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