Recombinant Human P-Selectin/CD62P His-tag

Catalog Number: 11035-PS

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human P-Selectin/CD62P protein Trp42-Ala771, with a C-terminal 6-His tag Accession # NP_002996.2
N-terminal Sequence Analysis	Trp42
Predicted Molecular Mass	81 kDa

SPECIFICATIONS

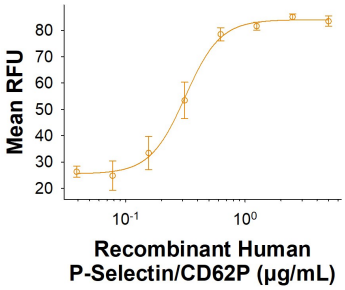
SDS-PAGE	105-125 kDa, under reducing conditions.
Activity	Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. The ED_{50} for this effect is 0.200-1.00 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

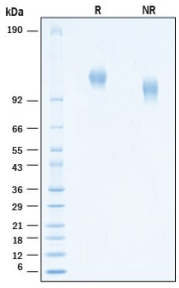
DATA

Bioactivity



Recombinant Human P-Selectin/CD62P His-tag Protein Bioactivity. Immobilized Recombinant Human P-Selectin/CD62P His-tag Protein (Catalog # 11035-PS) supports the adhesion of U937 human histiocytic lymphoma cells. The ED_{50} for this effect is 0.200-1.00 ug/mL.

SDS-PAGE



Recombinant Human P-Selectin/CD62P His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human P-Selectin/CD62P His-tag Protein (Catalog # 11035-PS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 105-125- kDa.

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BACKGROUND

P-Selectin, also known as GMP-140, PADGEM, and CD62P, is a cell surface glycoprotein of the Selectin family and is expressed by activated platelets and endothelial cells (1 - 3). In humans, there are 3 Selectins, P, E, and L and they are Ca2+-dependent lectins that help mediate the initial adhesive step during inflammation and immune surveillance (4). Mature human P-Selectin consists of an extracellular domain (ECD) with a C-type lectin domain and an EGF-like domain followed by a series of complement factor A repeat homology domains, a transmembrane domain and a short cytoplasmic domain (5). The mature ECD of human P-selectin shares 66% amino acid sequence identity with mouse P-Selectin. P-Selectin is translocated to the cell surface within minutes, from alpha granules of platelets or Weibel-Palade bodies of endothelial cells, following stimulation with thrombin, histamine, PMA or peroxides (6). P-Selectin binds to P-Selectin glycoprotein ligand-1 (PSGL-1), a dimeric molecule rich in O- and N-glycans, present on myeloid cells, neutrophils, monocytes and lymphocytes (7). P-Selectin plays a role in the adhesion of leukocytes and neutrophils to the endothelium. Acting in cooperation with L-Selectin, P-Selectin mediates the initial interaction of circulating leukocytes with endothelial cells that produces a characteristic 'rolling' of the leukocytes on the endothelium (8). This initial interaction is followed by a stronger interaction involving E-Selectin, and later ICAM-1 and VCAM-1, that leads eventually to extravasation of the white blood cell through the blood vessel wall into the extracellular matrix tissue (1, 3).

References:

1. Kansas, G.S. (1996) Blood **88**:3259.
2. Lü, S. (2015) PLOS One **10**:1.
3. Edwards, E.E. (2017) Integr. Biol. (Camb) **9**:313.
4. McEver, R.P. (1997) J. Clin. Invest. **100**:485.
5. Patel, K.D. (1995) J. Cell Biol. **131**:1893.
6. Zhang, N. (2016) Arterioscler Thromb. Vasc. Biol **36**:1114.
7. Frenette, P.S. *et al.* (2000) J Exp. Med. **191**:1413.
8. Zuchtriegel, G. (2016) PLOS Biology **14**:1.

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