P-Selectin

Analyte: P-Selectin

Specimen Type: EDTA Plasma, see note **

Optimum Volume: 0.25 mL

2-8°C	-20°C	-70°C
6 days	N.A.*	N.A.*

Reporting units: ng/mL

Method: ELISA

Biological or Clinical Significance:

P-selectin (GMP-140, LECAM-3, PADGEM, CD62, CD62P) is a cell surface glycoprotein that plays a critical role in the migration of lymphocytes into tissues. It is found constitutively in a pre-formed state in the Weibel-Palade bodies of endothelial cells and in the alpha granules of platelets. This stored P-selectin is mobilized to the surface within minutes in response to a variety of inflammatory or thrombogenic agents. The mobilized P-selectin is apparently present on the cell surface for only a few minutes, after which it is recycled to intracellular compartments.

Evidence indicates that P-selectin is involved in the adhesion of myeloid cells, as well as B cells and a subset of T cells, to activated endothelium. P-selectin is also involved in the adhesion of platelets to monocytes and neutrophils, playing a central role in neutrophil accumulation within thrombi. The adhesion of leukocytes and neutrophils to the endothelium is initiated by weak interactions that produce a characteristic “rolling” motion of the leukocytes and neutrophils on the endothelial surface

P-selectin is found in the plasma of normal individuals at ng/mL concentrations. Circulating P-selectin appears to be slightly smaller than native P-selectin. A number of studies have reported that levels of soluble P-selectin in biological fluids may be elevated in subjects with a variety of pathological conditions.

Principle of Test Method:

The P-selectin assay is a solid phase ELISA designed to measure soluble P-selectin in cell culture supernates, serum and plasma. THe assay employs the quantitative sandwich immunoassay technique.

*Please contact nexelis for stability information.

Note: P-selectin is released from leukocytes during coagulation, and platelets release P-selectin during the clotting process therefore, EDTA plasma is considered the preferred sample type for analysis. **Using serum for P-selectin analysis must be discussed with nexelis scientific team.

References:

1. Thom J, Gilmore, G, Yi Q, Hankey GJ, Eikelboom JW. Measurement of soluble P-selectin and soluble CD40 ligand in serum and plasma. J Thromb Haemost. 2004; 2:2067-2069.