



## Product Information

### MONOCLONAL ANTI-HUMAN P-SELECTIN (CD62P) CLONE AK4 Purified Mouse Immunoglobulin

Product No. **S5924**

Monoclonal Anti-Human P-Selectin (CD62P) (mouse IgG1 isotype) is derived from the AK4 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized BALB/c mouse. A purified human platelet glycoprotein membrane fraction (100-200 kD) immunodepleted of GP-IIb-IIIa (CD41) was used as the immunogen.<sup>1</sup> The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2). The product is provided as purified and 0.2 µm-filtered antibody in 0.01 M phosphate buffered saline, pH 7.4, to which no preservatives have been added.

Monoclonal Anti-Human P-selectin (CD62P) recognizes the human P-selectin antigen expressed by activated platelets and endothelial cells.

Monoclonal Anti-Human P-Selectin (CD62P) may be used for identification of activated platelets and endothelial cells by flow cytometry and cytochemistry. It is also useful in detecting soluble P-selectin.

P-selectin (CD62-P, GMP-140, LECAM-3, PADGEM) is a member of the LEC-CAM family of adhesion receptors that recognize specific carbohydrate ligands and mediate an early step in the interaction of leucocytes with endothelium, megakaryocytes and platelets. It is a cell surface glycoprotein (140-150 kD) and the extracellular region contains NH<sub>2</sub>-terminal C-type lectin domain, followed by a homologous EGF-like domain and nine short consensus repeats (SCR).<sup>2</sup> P-selectin is an α-granule membrane glycoprotein which is rapidly translocated to the plasma membrane of platelets in response to various inflammatory and thrombogenic agents. It is also located in the endothelial Weibel-Palade bodies and on the surface of activated endothelial cells. A circulating soluble form of P-selectin is found in the blood.<sup>3</sup> Levels of soluble P-selectin in biological fluids

may be elevated in patients with various pathological conditions. P-selectin mediates transient neutrophil adhesion to thrombin-stimulated endothelial cell membrane ('rolling' at physiological shear stress) and the binding of activated platelets to myeloid cells. It binds to the carbohydrate sialyl-Lewis (CD15s) on neutrophils and to sulphated galactosyl ceramides on neutrophils and tumor cells. Binding of P-selectin to its ligand is Ca<sup>2+</sup> dependent.<sup>4</sup> Monoclonal Anti-Human P-Selectin (CD62P) partially inhibits the P-selectin-mediated rosetting of HL-6 cells by thrombin-activated platelets.<sup>5</sup>

#### Titer

A titer of at least 1:200 was determined using indirect immunofluorescent staining of endothelial cells in human tonsil frozen sections.

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay.

#### Storage

For continuous use, store sterile at 2-8°C. For extended storage freeze in sterile working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

#### References

1. Skinner, M., et al., *Biochem. Biophys. Res. Commun.*, **164**, 1373 (1989).
2. Johnston, G., et al., *Cell*, **56**, 1033 (1989).
3. Dunlop, L., et al., *J. Exp. Med.*, **175**, 1147 (1992).
4. Tedder, T., et al., *FASEB J.*, **9**, 866 (1995).
5. Skinner, M., et al., *J. Biol. Chem.*, **266**, 5371 (1991).

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