ProductInformation

MONOCLONAL ANTI-HUMAN L-SELECTIN (CD62L)
CLONE FMC46
Purified Mouse Immunoglobulin

Product No. **S1300**

Product Description

Monoclonal Anti-Human L-Selectin (CD62L) (mouse IgG2b isotype) is derived from the FMC46 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized C57Bl mouse. Human PHA-activated peripheral blood mononuclear cells were used as the immunogen. 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).

Monoclonal Anti-Human L-Selectin (CD62L) recognizes the human CD62L antigen expressed on neutrophils, monocytes, NK cells and sub-populations of B and certain T lymphocytes.

Monoclonal Anti-Human L-Selectin (CD62L) is a homogenous population of antibody molecules which may be used for:

1. Detection and enumeration of CD62L cells in blood and tissues in health and disease.
2. Studies of L-Selectin (CD62L) function in cell-cell interactions.

The human L-Selectin (CD62L, LAM-1, Leu8, TQ1, LECAM-1, LECCAM-1, DREG, lymph node homing receptor, MEL-14 Ag) is a 74-95 kD glycoprotein member of the selectin family of adhesion receptors. L-Selectin is comprised of an amino-terminal C-type lectin binding domain, an epidermal growth factor-like domain, two short consensus repeat (SCR) sequences homologous to those found in complement binding proteins, a short spacer region, a transmembrane region and a short cytoplasmic region. Human L-Selectin (CD62L) is constitutively expressed on all classes of leukocytes including lymphocytes (except a substantial population of memory T cells), monocytes and polymorphonuclear cells. It is expressed on bone marrow myeloid progenitor cells, erythroid precursor cells and some thymocytes.[1,2,3] It is preferentially localized to the tips of lymphocytes and polymorphonuclear cells microvilli. Bioactive soluble L-Selectin derived from lymphocytes and neutrophils is present in normal and pathological biological fluids. Human L-Selectin (CD62L) binds to Sialyl Lewis^x, Sialyl Lewis^a, sulfatide, heparin, heparin sulfate, proteoglycans, fucoidan, dextran sulfate, yeast polyphosphomannan monoester core polysaccharide (PPME), carbohydrates presented on CD34 scaffold and to leukocyte P-Selectin glyco-protein Ligand-1 (PSGL-1). It is anchored to the cell cytoskeleton through interaction between its cytoplasmic tail and α-actinin. L-Selectin (CD62L) is shed by proteolytic cleavage from the surface of in vitro activated lymphocytes and neutrophils and in vivo from neutrophils during inflammation. Human L-Selectin (CD62L) mediates the transient calcium dependent binding of lymphocytes to specialized high endothelial cells in post capillary venules (HEV) of lymph nodes which are involved in lymphocyte homing and recirculation. L-Selectin also mediates leukocyte "rolling" on activated endothelial cells at sites of tissue injury and inflammation. Monoclonal Anti-Human L-Selectin (CD62L) stains, in frozen tissue sections, follicles and lymphocytes around blood vessels in spleen, medulla and subcapsular areas in thymus and mantle zone and to a lesser extent germinal centers in lymph nodes and tonsil. The epitope recognized by the antibody is localized to the lectin domain of L-Selectin. It is sensitive to routine formalin-fixation and paraffin-embedding. The antibody partially inhibits "rolling" interactions between L-Selectin transfected L1-2 cells and a purified peripheral node addressin.[4] It significantly reduces binding of FITC conjugated PPME binding to these cells as well as to blood lymphocytes, monocytes and neutrophils.[4] The antibody producing hybridoma was developed by H. Zola[1] and Coworkers at the department of Clinical Immunology, Flinders Medical Center, Adelaide, Australia.

Reagents

The product is provided as a (Protein A) purified and 0.2 µm filtered antibody in 0.01M phosphate buffered saline, pH 7.4.

Product Profile
A minimum dilution of 1:100 is determined using indirect immunofluorescent staining of acetone-fixed human tonsil frozen sections.

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. Pilarski, L.M., et al., J. Immunol., **147**, 136 (1991).
2. Tedder, T.F., et al., J. Immunol., **144**, 532 (1995).
3. Barclay, A.N., et al., in The Leukocyte Antigen Facts Book, pp. 348-349, Academic Press, London (1993).
4. Leucocyte Typing V, Schlossman, S.F., et al., (eds). Oxford University Press, Oxford, pp 1499, 1503, 1509, 1515, 1517 (S061) (1995).

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