

DESCRIPTION

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|------------------------------|---------------------------------------------------------------------|--------|---------------------------------------------|-----------|
| Source | Mouse myeloma cell line, NS0-derived human E-Selectin/CD62E protein | | | |
| | Human E-Selectin (Trp22 - Pro556) Accession # P16581 | IEGRMD | Human IgG ₁ (Pro100 - Lys330) | 6-His tag |
| | N-terminus | | C-terminus | |
| | | | | |
| N-terminal Sequence Analysis | Trp22 | | | |
| Structure / Form | Disulfide-linked homodimer | | | |
| Predicted Molecular Mass | 86 kDa (monomer) | | | |

SPECIFICATIONS

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| SDS-PAGE | 116 - 128 kDa, reducing conditions |
| Activity | Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When 5×10^4 cells/well are added to human E-Selectin/Fc Chimera coated plates (2 µg/mL with 100 µL/well), approximately 90-100% will adhere after 1 hour incubation at RT. Optimal dilutions should be determined by each laboratory for each application. |
| 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

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| Reconstitution | Reconstitute at 1 mg/mL in sterile, deionized water. |
| 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. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 4 weeks, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

E-Selectin (Endothelial Leukocyte Adhesion Molecule-1, ELAM-1, CD62E), a member of the Selectin family, is a 107 - 115 kDa cell surface glycoprotein. It is transiently expressed on vascular endothelial cells in response to IL-1 β and TNF- α , and demonstrates peak expression at 4 hours, and decay at 24 hours, in response to activation. E-Selectin ligands, expressed on neutrophils, monocytes, and a subset of memory T cells, are sialylated, fucosylated molecules which bind to the lectin domain of E-Selectin. Immunocytochemical techniques have demonstrated the expression of E-Selectin on healthy and diseased tissue. The human and mouse E-Selectin proteins share 81% amino acid similarity.

E-Selectin mediates the attachment of flowing leukocytes to the blood vessel wall during inflammation by binding to E-Selectin ligands on leukocytes. These interactions are labile and permit leukocytes to roll along the vascular endothelium in the direction of blood flow. This initial interaction is followed by a stronger interaction involving 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.

ELISA techniques have shown that detectable levels of soluble E-Selectin are present in the biological fluids of apparently normal individuals. Furthermore, a number of studies have reported that levels of E-Selectin may be elevated in subjects with a variety of pathological conditions.