



Recombinant Protein Technical Manual

Recombinant Human CD31/PECAM1 Protein (His Tag)

RPES2083

Product Data:

Product SKU: RPES2083

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: P16284

Protein Information:

Molecular Mass: 65.3 kDa

AP Molecular Mass: 85-95 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Platelet endothelial cell adhesion molecule; PECAM; EndoCAM; GPIIA; PECA1; CD31; PECAM1

Immunogen Information:

Sequence: Gln28-Lys601

Background:

Platelet Endothelial Cell Adhesion Molecule (PECAM1, CD31),

is a heavily glycosylated transmembrane protein belonging to the

immunoglobulin (Ig) superfamily of cell adhesion molecules. CD31 is composed of an extracellular domain (ECD) of 574 amino acids (aa) containing six Ig-like

domains, a transmembrane domain, and a 118 aa

cytoplasmic domain. CD31 is highly expressed on endothelial cells and at a lower level on platelets, granulocytes,

macrophages, dendritic cells, T and B cells, and natural killer (NK) cells. It is involved in cell adhesion and is required for transepithelial migration of leukocytes (TEM). CD31 acts as a homophilic receptor through its

extracellular domain and is involved in downstream signaling via its cytoplasmic domain. This domain contains highly conserved ITIM motifs which, once tyrosine

phosphorylated, recruit and activate the signaling molecules Src and SHP2. The resulting inhibition of TCR signaling increases the activation threshold of

T cells, thus reinforcing peripheral tolerance and preventing development of autoimmunity. CD31 additionally regulates immune responses by acting as a key

inhibitory receptor in dendritic cell development. CD31 is required for the transendothelial migration of leukocytes through intercellular junctions of vascular endothelial cells.