

## CD31/PECAM-1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	platelet/endothelial cell adhesion molecule 1; GPIIb/IIIa; PECAM-1; endoCAM; CD31/EndoCAM; CD31; PECA1
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Lys 601) of human CD31 (EAW94208.1) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 28
Species:	Human
Expression Host:	HEK293 Cells
Accession:	EAW94208.1
Molecular Weight:	66 kDa (predicted); 100-110 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells. When $8 \times 10^4$ cells/well are added to CD31-His coated plates (5 $\mu\text{g}/\text{mL}$ , 100 $\mu\text{L}/\text{well}$ ) in the presence of 10 $\mu\text{g}/\text{mL}$ PHA, approximately >70% will adhere after 30 minutes at 37°C.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu\text{g}$ of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu\text{m}$ filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

The Cluster of Differentiation 31 (CD31) adhesion molecule, also known as platelet-endothelial cell adhesion

molecule-1 (PECAM-1), is the only known member of the CAM family on platelets. CD31 protein is a 130-kDa transmembrane glycoprotein expressed by endothelial cells, platelets, monocytes, neutrophils, and certain T cell subsets. CD31 protein is also expressed in certain tumors, including epithelioid hemangioendothelioma, other vascular tumors, and histiocytic malignancies. CD31 plays a key role in removing aged neutrophils and tissue regeneration. CD31 protein mediates the homotypic or heterotypic cell adhesion by binding to itself or the leukocyte integrin  $\alpha\beta3$ , and thus plays a role in neutrophil recruitment in inflammatory responses, transendothelial migration of leukocytes, as well as in cardiovascular development.

### Reference

- Deaglio S, et al. (2000) CD38/CD31, a receptor/ligand system ruling adhesion and signaling in human leukocytes. *Chem Immunol.* 75: 99-120.
- Kohler S, et al. (2009) Life after the thymus: CD31+ and CD31- human naive CD4+ T-cell subsets. *Blood.* 113(4): 769-74.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481