

# Active Recombinant Human CD34 protein, His-tagged

**Cat. No.** CD34-01H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | <p>The recombinant human CD34 ECD protein is expressed as a 280-amino acid protein consisting of Ser32 - Thr290 region of and a C-terminal His-tag. It contains 9 potential N-linked glycosylation sites. Research Area: Stem Cell; Immunology.</p> <p>Pathway/Disease: Hemopoiesis; Cell adhesion; Leukemia.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 385aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>      | <p>CD34 is a singlepass, type I transmembrane protein belonging to the CD34 family that includes Podocalyxin, and Endoglycan. CD34 is a well-known hematopoietic progenitor cell antigen. It is a sialomucinlike molecule that is heavily glycosylated with 9 potential N-linked glycosylation sites in the extracellular domain. In the cytoplasmic region, CD34 contains serine residues that can be phosphorylated by PKC (protein kinase C), resulting in the recruitment of the hematopoietic adapter proteins and the activation of CD34 signaling pathways. CD34 is expressed on primitive hematopoietic stem cells and down-regulated as they differentiate into mature cells. The precise function of CD34 remains unclear. The pattern of CD34 expression suggests that it plays an important role in hematopoiesis. CD34 is found on multipotent precursors, bone marrow stromal cells, embryonic fibroblasts, vascular endothelia, mesenchymal stem cells, and some tumor cell lines. CD34 is involved in the adhesion of stem cells to the bone marrow extracellular matrix or to stromal cells. It can act as a scaffold for</p> |

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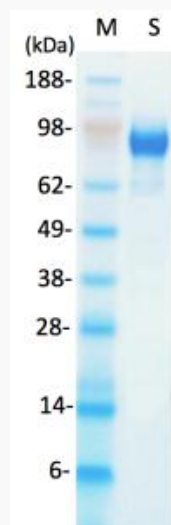
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|                       |                                                                                                                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. CD34 is overexpressed in many types of tumors and implicated in leukemogenesis.                                                                                   |
| <b>Form</b>           | Supplied at 0.5 mg/ml in sterile PBS pH7.4 (carrier & preservative free).                                                                                                                                                                                                                                   |
| <b>Bio-activity</b>   | Interacts with L-selectin and supports the adhesion of the human umbilical vein endothelial cell line (HUVEC). Binds anti-CD34 monoclonal antibodies, human IgG1 and rabbit IgG by ELISA with this immobilized protein.                                                                                     |
| <b>Molecular Mass</b> | Calculated molecular mass (kDa): 30; Estimated by SDS-PAGE under reducing condition (kDa): 75-90 suggesting that the protein may be heavily glycosylated                                                                                                                                                    |
| <b>AA Sequence</b>    | SLDNNGTATPELPTQGTFSNVSTNVSYQETTTTPSTLGSTSLHPVSQHGNEATTNITE<br>TTVKFTSTSVITSVYGNTNSSVQ SQTSVISTVFTTPANVSTPETTLKPSLSPGNVSDL<br>STTSTSLATSP TKPYTSSSPILSDIAEKCSGIREVKLTQGICL EQNKTSSCAEFKKD<br>RGEGLARVLCGEEQADADAGAQCVCALLAQSEVRPQCCLLVLANRTEISSKLQLMK<br>KHQSDLKKLG ILDFTEQDVASHQSYSQKTSTTENLYFQGSGTHHHHHHHH |
| <b>Endotoxin</b>      | <0.1 EU per 1 µg of purified recombinant protein determined by the LAL method.                                                                                                                                                                                                                              |
| <b>Purity</b>         | >92%                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>        | It is recommended to store small aliquots at the temperature below -20 centigrade for long-term storage and the product is stable for 3 months. The undiluted protein can be stored at 4 centigrade for no more than 2 weeks. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.           |
| <b>Shipping</b>       | 4 centigrade                                                                                                                                                                                                                                                                                                |

## GENE INFORMATION

|                        |                                                             |
|------------------------|-------------------------------------------------------------|
| <b>Gene Name</b>       | CD34 CD34 molecule [ Homo sapiens (human) ]                 |
| <b>Official Symbol</b> | CD34                                                        |
| <b>Synonyms</b>        | Hematopoietic progenitor cell antigen CD34; CD antigen CD34 |
| <b>Gene ID</b>         | 947                                                         |
| <b>mRNA Refseq</b>     | NM_001025109                                                |
| <b>Protein Refseq</b>  | NP_001020280                                                |
| <b>MIM</b>             | 142230                                                      |
| <b>UniProt ID</b>      | P28906                                                      |



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10 µg of purified protein sample ("S") analyzed by SDS-PAGE under reducing condition and stained with Coomassie blue; "M", protein markers with molecular mass in kDa indicated at left.

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