

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                      |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human CD34 in direct ELISA.                                                        |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Rabbit IgG Clone # 2936H                                                        |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                 |
| <b>Immunogen</b>                                                                                                                                                                                        | Chinese Hamster Ovary cell line, CHO-derived human CD34 Ser32-Thr290<br>Accession # P28906 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm            |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                               |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                            |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Flow Cytometry</b>      | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

CD34 is a 115 kDa glycosylated type I transmembrane protein; it was discovered as a hematopoietic cell-surface antigen (1, 2, 3). Human CD34 cDNA encodes a 385 amino acid (aa) precursor that contains a 31 aa signal sequence, a 259 aa extracellular domain (ECD), a 21 aa transmembrane sequence, and a 74 aa cytoplasmic domain. Within the ECD, human CD34 shares 55% and 52% aa sequence identity with mouse and rat CD34, respectively. This single-pass sialomucin-like transmembrane protein is heavily glycosylated and phosphorylated by Protein Kinase C (PKC) (4, 5). CD34 is found on multipotent precursors, bone marrow stromal cells, embryonic fibroblasts, vascular endothelia, as well as some populations of mesenchymal stem cells, and tumor cell lines, and it is a common marker for diverse progenitors (6). CD34 is involved in the adhesion of stem cells to the bone marrow extracellular matrix or to stromal cells.

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