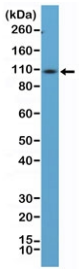
CD34 Antibody for WB / CD34 Western Blot Antibody [clone RM300] (R20322)

Catalog No.	Formulation	Size
R20322-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

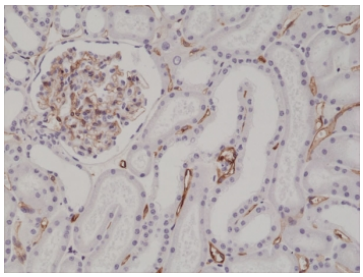
Recombinant RABBIT MONOCLONAL

Bulk quote request

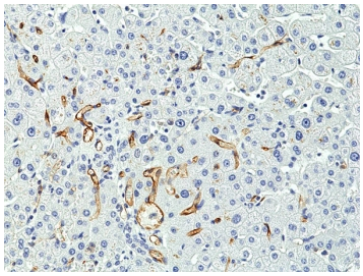
Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM300
Purity	Protein A purified from animal origin-free supernatant
UniProt	P28906
Localization	Cell membrane, cytoplasm
Applications	Immunohistochemistry (FFPE) : 1:100-1:200 Western Blot : 1:100-1:400
Limitations	This CD34 Antibody for WB / CD34 Western Blot Antibody is available for research use only.



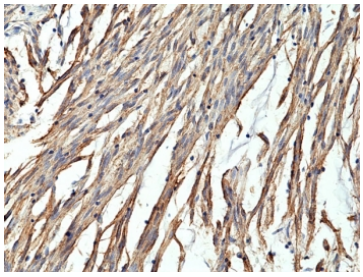
CD34 Antibody for WB. Western blot analysis of CD34 expression in mouse spleen lysate using clone RM300. Lane 1: mouse spleen tissue lysate. A band is detected at approximately 90-110 kDa, consistent with the predicted molecular weight of CD34 following extensive glycosylation. A weaker band near the lower range may correspond to less glycosylated or partially processed forms of the protein. The higher apparent molecular weight reflects known post-translational modification of CD34 as a heavily glycosylated cell surface protein, aligning with its expression in hematopoietic cell populations present in spleen tissue.



CD34 Antibody Kidney IHC. Immunohistochemistry testing of formalin fixed and paraffin embedded human kidney tissue with CD34 antibody at 1:200 dilution. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



CD34 Antibody Liver IHC. Immunohistochemistry testing of formalin fixed and paraffin embedded human liver tissue with recombinant CD34 antibody at 1:400 dilution. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



CD34 Antibody Gastrointestinal Stromal Tumor IHC. Immunohistochemistry testing of formalin fixed and paraffin embedded human gastrointestinal stromal tumor tissue with recombinant CD34 antibody at 1:400 dilution. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.

Description

Cluster of Differentiation 34 (CD34) is a transmembrane sialomucin glycoprotein encoded by the CD34 gene and is widely expressed on hematopoietic stem and progenitor cells as well as vascular endothelial cells. It functions in cell adhesion and migration within stem cell niches and vascular compartments and is a defining marker of early hematopoietic populations. CD34 Antibody for WB is used to detect CD34 protein expression in cell and tissue lysates, where its extensive post-translational modification produces characteristic banding patterns that differ significantly from its predicted molecular weight.

CD34 antibody, also known as hematopoietic stem cell marker antibody or vascular endothelial marker antibody, detects a protein with a predicted core molecular weight of approximately 40 kDa based on amino acid sequence. However, CD34 undergoes extensive O-linked and N-linked glycosylation, resulting in a substantially increased apparent molecular weight in SDS-PAGE. In western blot analysis, CD34 is most commonly observed as a broad band or diffuse signal ranging from approximately 90 kDa to 120 kDa, with variation depending on cell type, glycosylation state, and sample preparation conditions. This shift is a well-established feature of CD34 and reflects its heavily glycosylated extracellular domain.

This CD34 Antibody for WB is uniquely positioned for detection of glycosylated CD34 species, where heterogeneous glycosylation can produce multiple bands or smeared signal profiles. These patterns are frequently observed in western blot and represent biologically relevant glycoforms rather than non-specific binding. In some samples, a weaker band closer to the predicted core molecular weight may also be detected, corresponding to less glycosylated or partially processed forms of CD34. The presence of both high molecular weight and lower molecular weight bands can therefore provide additional insight into protein processing and cellular state.

Clone RM300 is a recombinant rabbit monoclonal antibody that recognizes a C-terminal region epitope of CD34, providing a distinct advantage for western blot detection. Because the C-terminal domain is located on the cytoplasmic side of the protein and is less affected by extracellular glycosylation, this antibody enables consistent recognition across

different glycoforms and sample conditions. Targeting the C-terminus improves reliability of detection in western blot, particularly in samples where heavy glycosylation may obscure extracellular epitopes or alter apparent molecular weight.

This antibody demonstrates reactivity in human, mouse, and rat samples, supporting cross-species detection of CD34 in widely used experimental systems. Western blot analysis of mouse spleen lysate shows a banding pattern consistent with CD34 expression in hematopoietic cell populations, reflecting the enrichment of progenitor and immune cell subsets within this tissue. Cross-species compatibility enhances its utility for translational studies and comparative analysis across model organisms.

CD34 expression detected by western blot may originate from both hematopoietic stem and progenitor cells and endothelial cell populations, depending on the tissue source. As a result, band intensity and pattern may vary between samples such as spleen, bone marrow, or vascular-rich tissues. Careful interpretation of band profiles in the context of tissue composition is therefore important for accurate biological conclusions.

Overall, CD34 Antibody for WB provides robust detection of glycosylated CD34 with characteristic high molecular weight banding patterns. Its recognition of a C-terminal epitope, compatibility across human, mouse, and rat samples, and ability to resolve heterogeneous glycoforms make it highly effective for western blot analysis of hematopoietic and endothelial protein expression.

This antibody is part of our CD34 antibody collection, supporting research into stem cell biology, endothelial markers, and tumor angiogenesis.

Application Notes

The stated application concentrations are suggested starting points. Titration of the CD34 Antibody for WB / CD34 Western Blot Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the C-terminus of human CD34 was used as the immunogen for the recombinant CD34 antibody.

Storage

Store the recombinant CD34 antibody at -20oC.

Alternate Names

CD34 western blot antibody, CD34 glycoprotein antibody, CD34 C-terminal antibody, hematopoietic stem cell marker antibody, CD34 WB antibody

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