

# PRODUCT INFORMATION



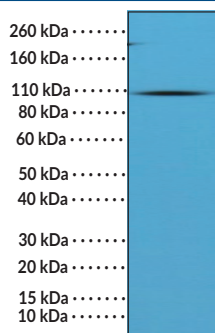
## CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300)

Item No. 32245

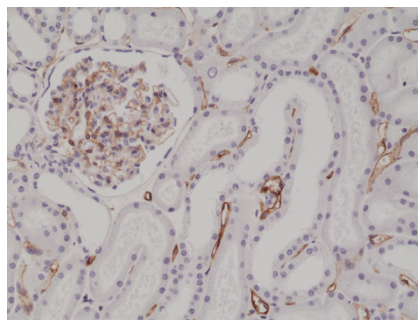
### Overview and Properties

<b>Contents:</b>	This vial contains 100 $\mu$ l of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Hematopoietic Progenitor Cell Antigen CD34
<b>Immunogen:</b>	Peptide from the C-terminal region of human CD34
<b>Cross Reactivity:</b>	(+) CD34
<b>Species Reactivity:</b>	(+) Human, mouse, rat
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	$\geq$ 1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM300
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

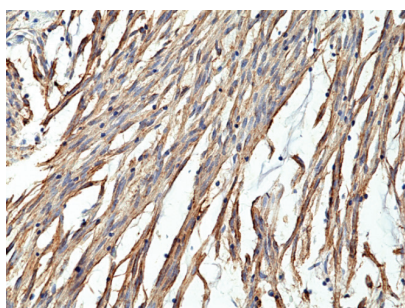
### Images



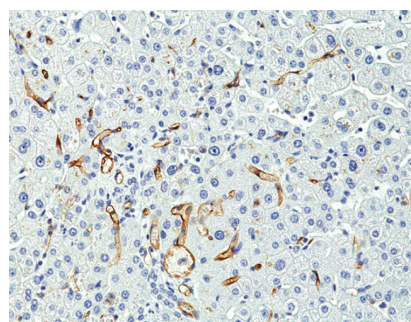
WB of mouse spleen tissue lysate using CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300) at a 1:100 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human kidney tissue using CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300) at a 1:200 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human gastrointestinal stromal tumor tissue using CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300) at a 1:400 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human liver tissue using CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300) at a 1:400 dilution.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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CD34 is a transmembrane phosphoglycoprotein and sialomucin protein that is commonly used as a marker for hematopoietic progenitor cells.<sup>1,3</sup> It is composed of an N-terminal signaling peptide, a sialylated and O-glycosylated extracellular mucin domain, a cysteine-containing globular domain, a juxtamembrane stalk region, and an intracellular C-terminal tail.<sup>2</sup> CD34 is expressed primarily in hematopoietic progenitor cells but is also expressed in mesenchymal stromal, muscle satellite, interstitial, epithelial and vascular endothelial progenitor, and adipose mesenchymal stem/stromal cells.<sup>2,3</sup> It has both pro- and anti-adhesion activities, providing an anchor for L-selectin-mediated attachment of lymphocytes in vascular endothelial cells and blocking adhesion of bone marrow-derived mast cells *in vitro*.<sup>3,4</sup> CD34 has commonly been used as a marker for the selection and enrichment of hematopoietic stem cells for bone marrow transplants.<sup>3</sup> Cayman's CD34 (C-Term) Rabbit Monoclonal Antibody (Clone RM300) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

## References

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1. Hughes, M.R., Hernaez, D.C., Cait, J., *et al.* A sticky wicket: Defining molecular functions for CD34 in hematopoietic cells. *Exp. Hematol.* **86**, 1-14 (2020).
2. Scherberich, A., Di Maggio, N., and McNagny, K.M. A familiar stranger: CD34 expression and putative functions in SVF cells of adipose tissue. *World J. Stem Cells* **5(1)**, 1-8 (2013).
3. Sidney, L.E., Branch, M.J., Dunphy, S.E., *et al.* Concise review: Evidence for CD34 as a common marker for diverse progenitors. *Stem Cells* **32(6)**, 1380-1389 (2014).
4. Drew, E., Merzaban, J.S., Seo, W., *et al.* CD34 and CD43 inhibit mast cell adhesion and are required for optimal mast cell reconstitution. *Immunity* **22(1)**, 43-57 (2005).

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