

## Technical Data Sheet

## Purified Rat Anti-Mouse CD31

## Product Information

<b>Material Number:</b>	558736
<b>Alternate Name:</b>	PECAM-1
<b>Size:</b>	0.1 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	390
<b>Immunogen:</b>	C3H/HeJ mouse hematopoietic progenitor cell line 32D
<b>Isotype:</b>	Rat (LEW) IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The 390 antibody reacts with CD31, also known as PECAM-1 (platelet endothelial cell adhesion molecule). CD31 is a ~130 kDa integral membrane glycoprotein, a member of the immunoglobulin superfamily, that mediates homophilic and heterophilic cell-cell adhesion. CD31 is expressed constitutively on the surface of adult and embryonic endothelial cells and is weakly expressed on many peripheral leukocytes and platelets. It has also been detected on bone marrow-derived hematopoietic stem cells and embryonic stem cells. CD31 is involved in the transendothelial emigration of neutrophils, and neutrophil PECAM-1 appears to be down-regulated after extravasation into inflamed tissues. Multiple alternatively spliced isoforms are detected during early post-implantation embryonic development; this alternative splicing is involved in regulation of ligand specificity. CD38 and vitronectin receptor ( $\alpha v \beta 3$  integrin, CD51/CD61) are proposed to be ligands for CD31. CD31-mediated endothelial cell-cell interactions are involved in angiogenesis. The 390 mAb inhibits a variety of in vitro and in vivo functions mediated by CD31.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4° C.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Blocking	Reported
Immunohistochemistry-frozen	Reported
Immunohistochemistry-zinc-fixed	Reported
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended
Western blot	Not Recommended

## Recommended Assay Procedure:

For IHC, we recommend the use of purified alternative anti-mouse CD31 mAbMEC 13.3 in our special formulation for immunohistochemistry, Cat. No. 550274.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553927	Purified Rat IgG2a, $\kappa$ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Igs	0.5 mg	Polyclonal
550274	Purified Rat Anti-Mouse CD31	1.0 ml	MEC 13.3

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## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE™ (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

## References

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