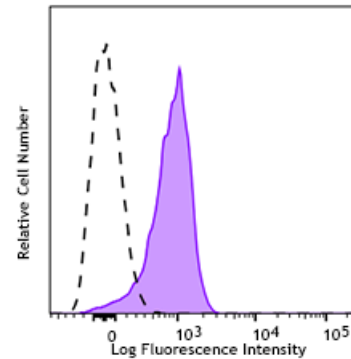


APC/Cyanine7 anti-mouse CD31

Catalog # / Size:	1112665 / 25 µg
Clone:	MEC13.3
Isotype:	Rat IgG2a, κ
Immunogen:	Polyoma middle T transformed EC line tEnd.1
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with APC/Cyanine7 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Workshop Number:	VI A034
Concentration:	0.2 mg/mL



C57BL/6 mouse splenocytes were stained with CD31 (clone MEC13.3) APC/Cyanine7 (filled histogram) or rat IgG2a, κ isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Anti-mouse CD31 clones 390 and MEC13.3 bind to their respective non-overlapping epitopes in IgD2 of CD31.⁸ Additional reported applications (in the relevant formats) include: immunoprecipitation¹, *in vitro* and *in vivo* blocking of CD31-mediated cell-cell interactions¹⁻⁴, and immunohistochemical staining^{1,5,6} of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections.

Special Note: The antibody works well on acetone-fixed frozen sections as well as Zinc-fixed paraffin-embedded sections. It sometime works on formalin-fixed and paraformaldehyde-fixed paraffin-embedded tissue sections but inconsistent results have been reported. This antibody is not recommended for formalin-fixed paraffin-embedded sections or for Western blot analysis.

- Application References:**
1. Vecchi A, *et al.* 1994. *Eur. J. Cell Biol.* 63:247. (IP, IHC, Block)
 2. Christofidou-Solomidou M, *et al.* 1997. *J. Immunol.* 158:4872. (Block)
 3. DeLisser HM, *et al.* 1997. *Am. J. Pathol.* 151:671. (Block)
 4. Rosenblum WI, *et al.* 1994. *Am. J. Pathol.* 145:33. (Block)
 5. Baldwin HS, *et al.* 1994. *Development* 120:2539. (IHC)
 6. Voswinckel R, *et al.* 2003. *Circ. Res.* 93:372. (IHC)
 7. Leung VW, *et al.* 2009. *Am J. Pathol.* 175:1757. [PubMed](#)
 8. Chacko AM, *et al.* 2012. *PLoS One* 7:e34958.
 9. Giacomini C, *et al.* 2014. *Exp Eye Res.* 18:1. [PubMed](#)
 10. Morita R, *et al.* 2015. *PNAS.* 112:160. [PubMed](#)
 11. Ito A, *et al.* 2015. *Brain Res.* 1594:310. [PubMed](#)

Description: CD31 is a 130-140 kD glycoprotein, also known as platelet endothelial cell adhesion molecule (PECAM-1), EndoCAM, and gpIIa. It is a member of the Ig superfamily, expressed on endothelial cells, platelets, granulocytes, monocytes/macrophages, dendritic cells, and T and B cell subsets, and is critical for cell-to-cell interactions. The primary ligands for CD31 have been reported to be CD38 and the vitronectin receptor ($\alpha_v \beta_3$ integrin, CD51/CD61). Other reported functions of CD31 are neutrophil emigration to sites of inflammation, and angiogenesis.

Antigen
References:

1. Barclay AN, *et al.* 1997. *The Leukocyte Antigen FactsBook* Academic Press.
2. DeLisser HM, *et al.* 1994. *Immunol. Today* 15:490.
3. Newman PJ, *et al.* 1990. *Science* 247:1219.