

Technical Data Sheet

Purified NA/LE Mouse Anti-Rat CD31

Product Information

Material Number:	555024
Alternate Name:	PECAM-1
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	TLD-3A12
Immunogen:	Lewis Rat Microglia
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat Tested in Development: Pig
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m filtered. Endotoxin level is ≤ 0.01 ng/ μ g of protein.

Description

The TLD-3A12 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 super family, that mediates homophilic and heterophilic cell-cell adhesion. CD31 is expressed on endothelial cells, platelets, and subsets of leukocytes. CD31-mediated endothelial cell-cell interactions are involved in angiogenesis in the mouse and rat. In addition, PECAM-1 has been demonstrated to play an important role in extravasation of leukocytes in vivo, but in vivo treatment with TLD-3A12 mAb had no discernable effect upon the inflammatory infiltrate in experimental allergic encephalomyelitis. The TLD-3A12 mAb partially blocks the proliferative response of antigen-specific CD4⁺ T cells to antigen-presenting cells and relevant antigen. The mouse anti-rat CD31 antibody cross-reacts with pig endothelial cells and platelets, as determined by immunohistochemical staining of acetone-fixed frozen sections and immunofluorescent staining with flow cytometric analysis. A suspension of Lewis rat microglial cells were used as the source of the immunogen.

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.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Store undiluted at 4° C.

Application Notes

Application

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
553447	Purified NA/LE Mouse IgG1 κ Isotype Control	0.5 mg	107.3
555988	FITC Goat Anti-Mouse IgG/IgM	0.5 mg	Polyclonal

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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/pharming/en/protocols for technical protocols.

References

DeLisser HM, Christofidou-Solomidou M, Strieter RM, et al. Involvement of endothelial PECAM-1/CD31 in angiogenesis. *Am J Pathol.* 1997; 151(3):671-677. (Biology)

DeLisser HM, Newman PJ, Albelda SM. Molecular and functional aspects of PECAM-1/CD31. *Immunol Today.* 1994; 15(10):490-495.(Biology)

Famiglietti J, Sun J, DeLisser HM, Albelda SM. Tyrosine residue in exon 14 of the cytoplasmic domain of platelet endothelial cell adhesion molecule-1 (PECAM-1/CD31) regulates ligand binding specificity. *J Cell Biol.* 1997; 138(6):1425-1435.(Biology)

Wakelin MW, Sanz MJ, Dewar A, et al. An anti-platelet-endothelial cell adhesion molecule-1 antibody inhibits leukocyte extravasation from mesenteric microvessels in vivo by blocking the passage through the basement membrane. *J Exp Med.* 1996; 184(1):229-239.(Biology)

Williams KC, Zhao RW, Ueno K, Hickey WF. PECAM-1 (CD31) expression in the central nervous system and its role in experimental allergic encephalomyelitis in the rat. *J Neurosci Res.* 1996; 45(6):747-757.(Immunogen: Blocking, ELISA, Immunohistochemistry, Immunoprecipitation)

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