Technical Data Sheet

Purified NA/LE Rat Anti-Mouse MAdCAM-1

Product Information

Material Number:	**553805**
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	MECA-367
Immunogen:	Mouse endothelial cells from BALB/c mouse mesenteric and peripheral lymph nodes.
Isotype:	Rat (WI) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2μm sterile filtered. Endotoxin level is ≤0.01 EU/μg (≤0.001 ng/μg) of protein as determined by the LAL assay.

Description

The MECA-367 antibody reacts with mucosal vascular addressin MAdCAM-1. In the fetus and neonate, MAdCAM-1 is the predominant vascular addressin on the high endothelial venules (HEV) of peripheral lymph nodes. In adult mice, MAdCAM-1 is preferentially expressed in mucosal lymphoid tissues and lamina propria; it is also expressed on sinus-lining cells in the spleen. MAdCAM-1 expression is upregulated on the HEV of peripheral lymph nodes in adult NOD mice4 and is involved in the development of diabetes and insulitis. Furthermore, there is evidence that IFN-γ can induce MAdCAM-1 expression in non-mucosal sites in adult mice. MAdCAM-1 is a predominant ligand for integrin α4β7, a lymphocyte mucosal homing receptor, and a facultative ligand for CD62L (L-selectin). MECA-367 mAb binds to the first domain of MAdCAM-1 and blocks MAdCAM-1-dependent binding *in vitro* and lymphocyte homing to Peyer's patch HEV *in vivo*. Source of the immunogen was endothelial cells from BALB/c mouse mesenteric and peripheral lymph nodes.

Preparation and Storage

Store undiluted at 4°C.

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.

Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported
Western blot	Reported
Immunoprecipitation	Reported
Immunoaffinity Chromatography	Reported
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:

For IHC, we recommend the use of purified MECA-367 mAb in our special formulation for immunohistochemistry, Cat. No. 550556.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553926	Purified NA/LE Rat IgG2a κ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal

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 for technical protocols.

References

Berg EL, McEvoy LM, Berlin C, Bargatze RF, Butcher EC. L-selectin-mediated lymphocyte rolling on MAdCAM-1. *Nature.* 1993; 366(6456):695-698. (Clone-specific: Immunoaffinity chromatography, Immunoprecipitation)

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Hänninen A, Salmi M, Simell O, Andrew D, Jalkanen S. Recirculation and homing of lymphocyte subsets: dual homing specificity of beta 7-integrin(high) -lymphocytes in nonobese diabetic mice. *Blood.* 1996; 88(3):934-944. (Clone-specific: Blocking, Immunohistochemistry)
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Lee MS, Sarvetnick N. Induction of vascular addressins and adhesion molecules in the pancreas of IFN-gamma transgenic mice. *J Immunol.* 1994; 152(9):4597-4603. (Clone-specific: Immunohistochemistry)
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Picarella D, Hurlbut P, Rottman J, Shi X, Butcher E, Ringler DJ. Monoclonal antibodies specific for beta 7 integrin and mucosal addressin cell adhesion molecule-1 (MAdCAM-1) reduce inflammation in the colon of scid mice reconstituted with CD45RBhigh CD4+ T cells. *J Immunol.* 1997; 158(5):2099-2106. (Clone-specific: Blocking)
Streeter PR, Berg EL, Rouse BT, Bargatze RF, Butcher EC. A tissue-specific endothelial cell molecule involved in lymphocyte homing. *Nature.* 1988; 331(6151):41-46. (Immunogen: Blocking, Immunoaffinity chromatography, Immunohistochemistry, Western blot)
Yang XD, Sytwu HK, McDevitt HO, Michie SA. Involvement of beta 7 integrin and mucosal addressin cell adhesion molecule-1 (MAdCAM-1) in the development of diabetes in obese diabetic mice. *Diabetes.* 1997; 46(10):1542-1547. (Clone-specific: Blocking)

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