Technical Data Sheet

Purified Mouse Anti-Rat CD2

Product Information

Material Number:	**554826**
Alternate Name:	LFA-2
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	OX-34
Immunogen:	Rat T blasts from mixed lymphocyte reactions
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The OX-34 antibody reacts with CD2 (LFA-2), a member of the immunoglobulin superfamily. In the rat, CD2 is expressed on thymocytes, T lymphocytes in spleen and lymph node, dendritic epidermal T cells, splenic macrophages, and NK cells, but not on B cells, most intestinal intraepithelial lymphocytes, or peritoneal and liver macrophages. CD2 can associate with the T-cell receptor complex, and it may function in both intercellular adhesion and signal transduction. In the rat, CD48 and CD59 have been identified as ligands for CD2. OX-34 mAb binds to the extracellular portion of CD2, and it blocks the binding of CD2 to CD48. While OX-34 antibody does not activate T cells, it partially blocks activation by immobilized mAbs to CD3 (clone G4.18) and αβ T-cell receptor (clone R73), and it partially inhibits allogeneic mixed lymphocyte reactions. Moreover, *in vivo* administration of OX-34 antibody depletes peripheral T cells and prevents allograft rejection.

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
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunohistochemistry-frozen	Reported
Immunoprecipitation	Reported
Blocking	Reported
Depletion	Reported

Recommended Assay Procedure:

This antibody has been tested by immunohistochemical staining of citrate-pretreated formalin-fixed paraffin-embedded rat spleen and thymus tissue sections (1 - 5 µg/ml) during the development and it has not been tested for each lot for the immunohistochemical application.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553454	Purified Mouse IgG2a κ Isotype Control	0.5 mg	G155-178
554001	FITC Goat Anti-Mouse 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.
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.

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

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

Beyers AD, Spruyt LL, Williams AF. Molecular associations between the T-lymphocyte antigen receptor complex and the surface antigens CD2, CD4, or CD8 and. *Proc Natl Acad Sci U S A.* 1992; 89(7):2945-2949.(Biology)

Brown MH, Preston S, Barclay AN. A sensitive assay for detecting low-affinity interactions at the cell surface reveals no additional ligands for the adhesion pair rat CD2 and CD48. *Eur J Immunol.* 1995; 25(12):3222-3228.(Biology)

Clark SJ, Law DA, Paterson DJ, Puklavec M, Williams AF. Activation of rat T lymphocytes by anti-CD2 monoclonal antibodies. *J Exp Med.* 1988; 167(6):1861-1872.(Biology)

Elbe A, Kilgus O, Hünig T, and Stingl G. T-cell receptor diversity in dendritic epidermal T cells in the rat. *J Invest Dermatol.* 1993; 102:74-79.(Biology)

Fangmann J, Schwinzer R, Wonigeit K. Unusual phenotype of intestinal intraepithelial lymphocytes in the rat: predominance of T cell receptor alpha/beta+/CD2- cells and high expression of the RT6 alloantigen. *Eur J Immunol.* 1991; 21(3):753-760.(Biology)

Hirahara H, Tsuchida M, Watanabe T, et al. Long-term survival of cardiac allografts in rats treated before and after surgery with monoclonal antibody to CD2. *Transplantation.* 1995; 59(1):85-90.(Clone-specific: Blocking, Depletion)

Jefferies WA, Green JR, Williams AF. Authentic T helper CD4 (W3/25) antigen on rat peritoneal macrophages.. *J Exp Med.* 1985; 162:117-127.(Immunogen: Immunoprecipitation)

Liversidge J, Dawson R, Hoey S, McKay D, Grabowski P, Forrester JV. CD59 and CD48 expressed by rat retinal pigment epithelial cells are major ligands for the CD2-mediated alternative pathway of T cell activation. *J Immunol.* 1996; 156(10):3696-3703.(Biology)

van den Brink MR, Hunt LE, Hiserodt JC. In vivo treatment with monoclonal antibody 3.2.3 selectively eliminates natural killer cells in rats. *J Exp Med.* 1990; 171(1):197-210.(Biology)

van der Merwe PA, Brown MH, Davis SJ, Barclay AN. Affinity and kinetic analysis of the interaction of the cell adhesion molecules rat CD2 and CD48. *EMBO J.* 1993; 12(3):4945-4954.(Biology)

Williams AF, Barclay AN, Clark SJ, Paterson DJ, Willis AC. Similarities in sequences and cellular expression between rat CD2 and CD4 antigens. *J Exp Med.* 1987; 165(2):368-380.(Clone-specific: Immunohistochemistry)