

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD18

Product Information

Material Number:	553341
Alternate Name:	Integrin $\beta 2$ chain
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	M18/2
Immunogen:	Mouse CTL glycoproteins
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is ≤ 0.01 EU/ μ g (≤ 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The M18/2 antibody reacts with the common $\beta 2$ chain of LFA-1 (CD11a/CD18, $\alpha L\beta 2$ integrin), Mac-1 (CD11b/CD18, $\alpha M\beta 2$ integrin), and gp150, 95 (CD11c/CD18, $\alpha X\beta 2$ integrin). Expression of CD18 is limited to leukocytes, where it is widely distributed in consort with the three integrin α chains (CD11a, CD11b, and CD11c). Among splenocytes, NK cells have the highest density of CD18, and T lymphocytes express a higher density than the remaining cells. The $\beta 2$ integrins are important mediators of leukocyte-endothelium interactions. It has been reported that M18/2 antibody blocks *in vivo* metastasis of the LB lymphoma to the spleen and that it blocks *in vitro* formation of aggregates of LB cells and splenocytes. However, other reports indicate that mAb M18/2 has no effect on CTL-mediated killing, adherence of C3bi-sensitized erythrocytes to Mac-1, antigen-specific binding of T cells to antigen-producing cells, or rejection of cardiac allografts. Recent *in vitro* studies indicate that M18/2 antibody stimulates adhesion of Mac-1 to its ligands C3bi and ICAM-1, and it stimulates adhesion of LFA-1 to ICAM-1, but it has no effect upon the interactions of LFA-1 with ICAM-2 nor ICAM-3.

Alternative antibody clone GAME-46 (Cat. No. 555280) has been reported to block *in vitro* adhesion of LFA-1-expressing cells to the ligands ICAM-1, ICAM-2, ICAM-3 and of Mac-1-expressing cells to ICAM-1, C3bi, and fibrinogen.

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
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunohistochemistry-frozen	Tested During Development
Blocking	Reported
Functional assay	Reported
Stimulation	Reported

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
557437	Purified Rat Anti-Mouse CD18	0.1 mg	M18/2
555280	Purified NA/LE Rat Anti-Mouse CD18	0.5 mg	GAME-46

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Driessens MH, van Hulten P, Zuurbier A, La Riviere G, Roos E. Inhibition and stimulation of LFA-1 and Mac-1 functions by antibodies against murine CD18. Evidence that the LFA-1 binding sites for ICAM-1, -2, and -3 are distinct. *J Leukoc Biol.* 1996; 60(6):758-765. (Clone-specific: Blocking)

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Zahalka MA, Okon E, Naor D. Blocking lymphoma invasiveness with a monoclonal antibody directed against the beta-chain of the leukocyte adhesion molecule (CD18). *J Immunol.* 1993; 150(10):4466-4477. (Clone-specific: Blocking, Stimulation)

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