ADVANCED TARGETING SYSTEMS

6352 CORTE DEL ABETO, STE B
CARLSBAD, CA 92011 USA
01.858.642.1988 • WWW.ATSBIO.COM

Alexa488-labeled Antibody to Mac-1 (CD11b)

RAT MONOCLONAL (IgG_{2b})

Catalog Number: FL-N05
Quantity: 100 micrograms
Format: 50% PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), 50% glycerol; no preservative.
Host: Rat
Isotype: IgG_{2b}
Clone: CD11b
Immunogen: B10 mouse spleen cells enriched for T-lymphocytes

Background:
CD11b is an alpha subunit of Mac-1, also known as CR3. CD11b is the receptor for the C3bi fragment of complement. This receptor is involved in bacterial phagocytosis. A reduction in neutrophil CD11b expression after severe traumatic injury correlates with increased septic complications. CD11b is a component of integrins, important for adhesion of neutrophils to surfaces. Mac-1 exists as a chemoattractant activation-dependent molecule that undergoes a conformational change upon stimulation. Expression of new epitopes on Mac-1 can be detected after activation by specific reporter monoclonal antibodies. Until stimulation occurs, Mac-1 remains in a resting, non-adhesive state. Activation of Mac-1 may play a role during neutrophil recruitment to the inflamed site.

Specificity and Preparation:
This antibody recognizes human and mouse Mac-1 (CD11b). The hybridoma was formed by the fusion of mouse myeloma NS1 cells with spleen cells from rats immunized with B10 mouse spleen cells enriched for T-lymphocytes. It has been conjugated to the fluorescent dye Alexa488. The antibody is routinely tested by flow cytometry.

Usage and Storage:
Applications include immunoprecipitation,[1] flow cytometry (50 μl),[2] cytotoxicity assay (EC_{50}=16 pM),[3] and binding assay (5 and 50 μl of culture supernatant).[3]
Gently spin down material before use; 5-10 seconds in a microfuge should be adequate. The material can be handled safely using normal laboratory precautions. See Lot Number for lot-specific storage instructions.

References:
1. Sanchez-Madrid F, Simon P, Thompson S, Springer TA. (1983) Mapping of antigenic and functional epitopes on the alpha- and beta-subunits of two related mouse glycoproteins involved in cell interactions, LFA-1 and Mac-1. *J Exp Med* 158:586-602.
2. Springer T, Galfre G, Secher DS, Milstein C. (1979) Mac-1: a macrophage differentiation antigen identified by monoclonal antibody. *Eur J Immunol* 9:301-306.
3. Springer, T., Galfre, G., Secher, D.S., Milstein, C. (1978) Monoclonal xenogeneic antibodies to murine cell surface antigens: identification of novel leukocyte differentiation antigens. *Eur J Immunol* 8:539-551.

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