MONOCLONAL ANTIBODY TO HUMAN ACTIVATED CD11/CD18
clone 24

Catalog nr HM2183 (lot number and expiry date are indicated on the label)

Description The monoclonal antibody 24 recognizes an epitope of 174 kD present on leukocyte integrins, CD11/CD18 or beta 2-type integrins. The leukocyte integrins are a family of heterodimeric receptors that mediate divalent cation-dependent cellular adhesion reactions. T cells use integrins in essentially all of their functions. Integrins become active following signalling through other membrane receptors, which cause both affinity alteration and an increase in integrin clustering. The monoclonal antibody 24 recognizes a structural feature and is strictly dependent upon the presence of Mg^{2+}. The epitope is located within, or in close proximity to, the three conserved cation binding domains and therefore a measure of Mg^{2+} bound to the leukocyte integrins and thus reflects functionally active molecules. The epitope can be induced on polymorphonuclear leukocytes and on monocytes. Glu^{173} and Glu^{175} of the beta(2) I domain are identified as critical for antibody 24 binding.
The monoclonal antibody 24 inhibits monocyte-dependent, antigen specific T cell proliferation and IL-2-activated natural killer cell assays. The antibody does not interfere with mitogen-stimulated T cell proliferation. Furthermore the monoclonal antibody 24 prevents “deadhesion” of receptor/ligand pairs, possible locking leukocyte integrins in an “active” conformation.

Species Mouse IgG_1

Formulation 1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin.

Application The monoclonal antibody 24 can be used for immunohistology on frozen sections, flow cytometry, immuno assays and immuno precipitation. Furthermore the antibody 24 is useful for functional studies.

Use For immunohistology and flow cytometry dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. For functional studies dilutions have to be made according to the amounts activated CD11/CD18 to be inhibited.

Storage and stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result with the use of or derivation of this product.

References

1. Hogg, N et al; An anti-human monocyte/macrophage monoclonal antibody, reacting most strongly with macrophages in lymphoid tissue. Cell Immunol 1985, *92*: 247
2. Dransfield, I et al; Regulated expression of Mg2+ binding epitope on leukocyte integrin alpha subunits. EMBO J 1989, *8*: 3759
3. Dransfield, I et al; Interaction of leukocyte integrins with ligand is necessary but not sufficient for function. J Cell Biol 1992, *116*: 1527
4. Kamata, T et al; The role of the CPNKEKEC sequence in the beta(2) subunit I domain in regulation of integrin alpha(L)beta(2) (LFA-1). J Immunol 2002, *168*: 2296
5. Hogg, N et al; T-cell integrins: more than just sticking points. J Cell Sci 2003, *116*: 4695

Also available

HM2158	Monoclonal antibody against Human mature macrophages, clone 25F9
HM2125	Monoclonal antibody against Human CD11b, clone Bear-1