Human Integrin β2/CD18
Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 212701

Catalog Number: FAB1730R
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Integrin β2/CD18 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Integrin β1 or recombinant mouse Integrin α5 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 212701
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Integrin β2/CD18 Gln23-Asn700 Accession # AAA59490
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	Human peripheral blood mononuclear cells

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Integrin αXβ2, also called CD11c/CD18, p150/95 or complement receptor type 4 (CR4), is one of four β2 integrins. The non-covalent heterodimer of 150 kDa αX/CD11c and 95 kDa β2/CD18 integrin subunits is expressed on macrophages, dendritic cells and hairy cell leukemias, with lower amounts on other myeloid cells and activated B, NK and some cytotoxic T cells (1-7). Like other integrins, αXβ2 has multiple activation states (3). In the presence of divalent cations and "inside-out" signaling, αXβ2 is fully active and extended. The αX vWFA or I-domain, which contains the adhesion sites, forms the N-terminal head region with the αX beta-propeller and the β2 vWFA domain (1, 8). In the inactive state, the heterodimer flexes in the center at the αX thigh and calf domains and β2 I-EGF domains, impeding access to adhesion sites (1). The 1088 aa human αX/CD11c ECD shares 70-76% aa sequence identity with mouse, rat and canine αX while the 678 aa human β2/CD18 ECD shares 81-83% aa sequence identity with mouse, rat, cow, dog, goat, sheep, and pig β2. Potential αX isoforms containing 719 and 725 aa (as compared to full-length 1163 aa αX) lack the vWFA domain and the N-terminus. Active αXβ2 shares some adhesion partners with αMβ2/CD11b/CD18, including complement opsonin fragment iC3b, ICAMs, vWF and fibrinogen, and is expressed on many of the same cells (4-11). However, αMβ2 activity is often constitutive, while αXβ2 activity requires cell activation (4-7). αXβ2 also binds osteopontin, Thy-1, plasminogen, heparin, and proteins with abnormally exposed acidic residues (11-16). The adhesion events are important for proliferation, degranulation, chemotactic migration, and phagocytosis of complement-opsonized particles (5, 6, 9, 11, 12, 16). Mutations of β2, especially in the vWFA domain, cause leukocyte adhesion deficiency (LAD-1) and susceptibility to bacterial infections (17).

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