Human Integrin β1/CD29 Antibody
Monoclonal Mouse IgG1 Clone # P5D2
Catalog Number: MAB17781

DESCRIPTION
Species Reactivity Human
Specificity Detects human Integrin β1/CD29.
Source Monoclonal Mouse IgG1 Clone # P5D2
Purification Protein A or G purified from hybridoma culture supernatant
Immunogen Human skin keratinocytes
Endotoxin Level <0.10 EU per 1 μg of the antibody by the LAL method.
Formulation Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.
*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

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 µg/10⁶ cells See Below
Immunocytochemistry 8-25 µg/mL See Below
CyTOF-ready Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.
Knockout Validated Integrin β1/CD29 is specifically detected in A549 lung carcinoma parental cell line but is not detectable in Integrin β1/CD29 knockout A549 cell line.

DATA
Flow Cytometry
Detection of Integrin β1/CD29 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human Integrin β1/CD29 Monoclonal Antibody (Catalog # MAB17781, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

Immunocytochemistry
Integrin β1/CD29 in human PBMCs. Integrin β1/CD29 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Mouse Anti-Human Integrin β1/CD29 Monoclonal Antibody (Catalog # MAB17781) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 587-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to plasma membrane. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Knockout Validated
Integrin β1/CD29 Specificity is Shown by Flow Cytometry in Knockout Cell Line. Integrin β1/CD29 knockout A549 human lung carcinoma cell line was stained with Mouse Anti-Human Integrin β1/CD29 Monoclonal Antibody (Catalog # MAB17781, filled histogram) or isotype control antibody (Catalog # F0102B). No staining in the Integrin β1/CD29 knockout A549 cell line was observed. View our protocol for Staining Membrane-associated Proteins.
**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage**
- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**
The Integrin β1 subunit, also known as CD29, associates with at least ten different Integrin α subunits. It regulates not only its multiple ligands, but activates a signaling cascade in its expressing cells. CD29 is proposed to play a role in cell adhesion, apoptosis, and differentiation (1,2). Over amino acids (aa) 21-728, human and mouse share 92% aa sequence identity.

**References:**