Human/Canine Integrin β1/CD29 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1778

DESCRIPTION

Species Reactivity	Human/Canine
Specificity	Detects human Integrin β1/CD29 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant mouse (rm) Integrin β1 is observed and less than 1% cross-reactivity with recombinant human (rh) Integrin β2, rhIntegrin β3, rhIntegrin β5, and rhIntegrin β7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Integrin β1 isoform 1A Gln21-Asp728 Accession # P05556
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.

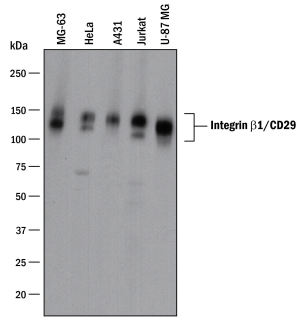
APPLICATIONS

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
Western Blot	μg/mL	See Below
Flow Cytometry	0.25 μg/10^6 cells	See Below
Immunocytochemistry	5-15 μg/mL	See Below
Simple Western	10 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 HeLa human cervical epithelial carcinoma parental cell line but is not detectable in Integrin β1/CD29 knockout HeLa cell line.	

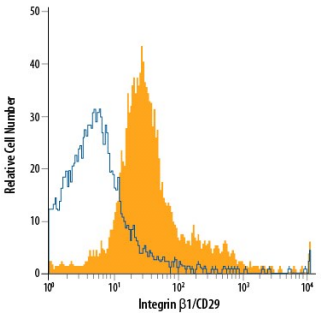
DATA

Western Blot



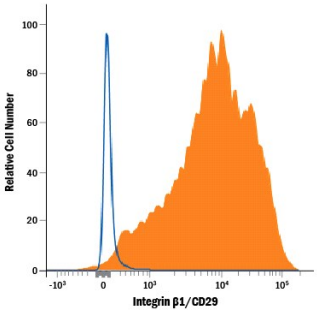
Detection of Human Integrin β1/CD29 by Western Blot. Western blot shows lysates of MG-63 human osteosarcoma cell line, HeLa human cervical epithelial carcinoma cell line, A431 human epithelial carcinoma cell line, Jurkat human acute T cell leukemia cell line, and U-87 MG human glioblastoma/astrocytoma cell line. PVDF membrane was probed with 1 μg/mL of Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for Integrin β1/CD29 at approximately 130-140 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



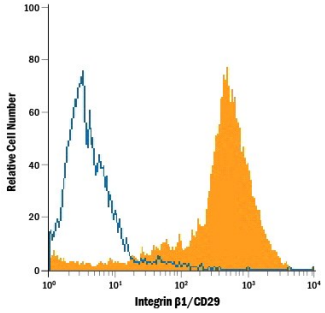
Detection of Integrin β1/CD29 in Canine PBMCs by Flow Cytometry. Canine peripheral blood mononuclear cells (PBMCs) were stained with Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

Flow Cytometry



Detection of Integrin β1/CD29 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

Flow Cytometry



Detection of Integrin β1/CD29 in Canine Mesenchymal Stem Cells by Flow Cytometry. Canine mesenchymal stem cells were stained with Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

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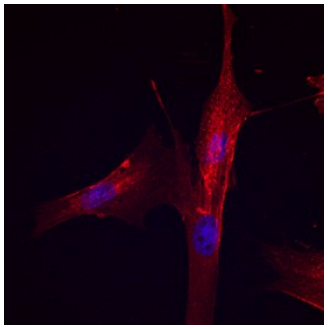
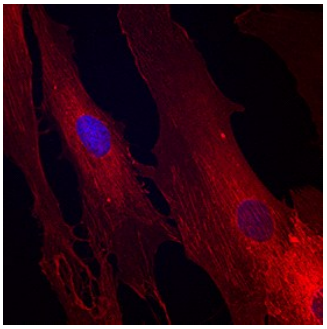
Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1778

Immunocytochemistry



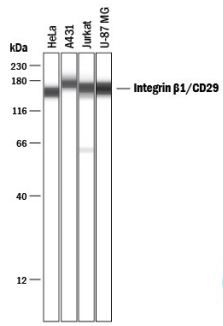
Integrin β1/CD29 in Canine Mesenchymal Stem Cells. Integrin β1/CD29 was detected in immersion fixed canine mesenchymal stem cells using Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Stem Cells on Coverslips.

Immunocytochemistry



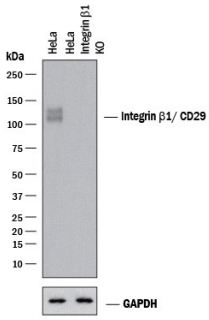
Integrin β1/CD29 in Human Mesenchymal Stem Cells. Integrin β1/CD29 was detected in immersion fixed human mesenchymal stem cells using Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Stem Cells on Coverslips.

Simple Western



Detection of Human Integrin β1/CD29 by Simple Western™. Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line, A431 human epithelial carcinoma cell line, Jurkat human acute T cell leukemia cell line, and U-87 MG human glioblastoma/astrocytoma cell line, loaded at 0.2 mg/mL. Specific bands were detected for Integrin β1/CD29 at approximately 157-176 kDa (as indicated) using 10 µg/mL of Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

Knockout Validated



Western Blot Shows Human Integrin β1/CD29 Specificity by Using Knockout Cell Line. Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and Integrin β1/CD29 knockout HeLa cell line (KO). PVDF membrane was probed with 2 µg/mL of Goat Anti-Human/Canine Integrin β1/CD29 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1778) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for Integrin β1/CD29 at approximately 110-120 kDa (as indicated) in the parental HeLa cell line, but is not detectable in knockout HeLa cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

Integrin β1, also called CD29 and VLA-β chain, associates with at least ten different integrin α subunits to form various VLA complexes. The β1 subunit has a broad tissue distribution except erythrocytes. Over aa 21-720, human Integrin β1 shares 95% aa identity with canine Integrin β1.

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