

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Integrin α V in direct ELISAs and Western blots. Detects human, mouse and rat Integrin α V in Simple Western application. In Western blots, less than 1% cross-reactivity with recombinant human Integrin α 5 and recombinant mouse Integrin E is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Integrin α V/CD51 Phe31-Val992 Accession # P06756
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

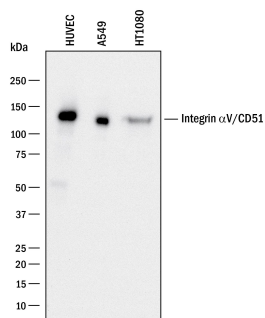
APPLICATIONS

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	0.5 μ g/mL	See Below
Flow Cytometry	2.5 μ g/10 ⁶ cells	Human peripheral blood mononuclear cells
Immunocytochemistry	5-15 μ g/mL	See Below
Simple Western	20 μ g/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

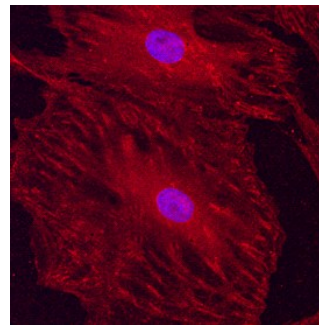
DATA

Western Blot



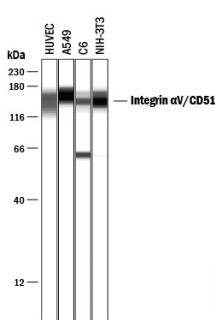
Detection of Human Integrin α V/CD51 by Western Blot. Western blot shows lysates of HUVEC human umbilical vein endothelial cells, A549 human lung carcinoma cell line, and HT1080 human fibrosarcoma cell line. PVDF membrane was probed with 0.5 μ g/mL of Goat Anti-Human Integrin α V/CD51 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1219) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Integrin α V/CD51 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Integrin α V/CD51 in Rat Mesenchymal Stem Cells. Integrin α V/CD51 was detected in immersion fixed undifferentiated rat mesenchymal stem cells using Goat Anti-Human/Mouse/Rat Integrin α V/CD51 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1219) at 10 μ g/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 cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Simple Western



Detection of Human, Mouse, and Rat Integrin α V/CD51 by Simple Western™. Simple Western lane view shows lysates of HUVEC human umbilical vein endothelial cells, A549 human lung carcinoma cell line, C6 rat glioma cell line, and NIH-3T3 mouse embryonic fibroblast cell line, loaded at 0.2 mg/mL. A specific band was detected for Integrin α V/CD51 at approximately 149-161 kDa (as indicated) using 20 μ g/mL of Goat Anti-Human/Mouse/Rat Integrin α V/CD51 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1219) 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.



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. <ul style="list-style-type: none">● 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 α V, also known as CD51 and vitronectin receptor subunit α , is a 140-150 kDa integrin alpha chain that forms dimers with at least five beta chains including β 1, 3, 5, 6, and 8. It is a 1018 amino acid (aa) residue type I membrane protein with a large (962 aa) extracellular domain (ECD) and a short (32 aa) cytoplasmic tail. The N-terminal region of α V, which is important for ligand binding, contains seven FG-GAP (phenylalanyl-glycyl and glycyl-alanyl-prolyl) consensus repeats that fold into a β -propellar domain. Furin cleavage of the α V ECD occurs after Gly 889, generating a disulfide-linked, heteromeric subunit α V chain. α V-containing integrins bind multiple ECM molecules, including vitronectin, osteopontin, MMP-2, and TSP. The ECD of human Integrin α V shares 92% aa sequence identity with mouse Integrin α V ECD.