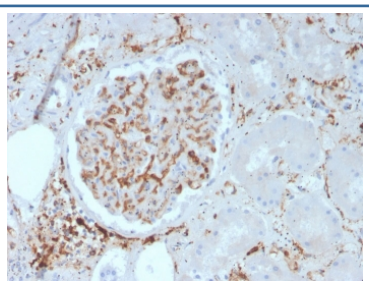
ITGB1 Antibody ITGB1/3613 / CD29 Monoclonal Antibody [clone ITGB1/3613] (V8418)

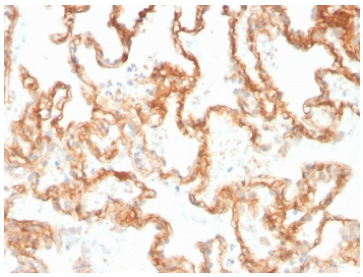
Catalog No.	Formulation	Size
V8418-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8418-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8418SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

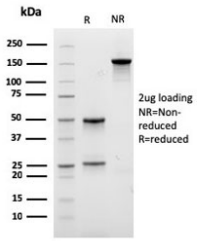
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ITGB1/3613
Purity	Protein G affinity chromatography
UniProt	P05556
Localization	Cell membrane, cytoplasm
Applications	ELISA: order Ab without BSA for coating Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT Western blot: 2-4ug/ml
Limitations	This ITGB1 Antibody ITGB1/3613 / CD29 Monoclonal Antibody is available for research use only.



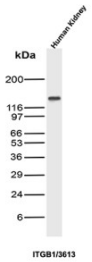
ITGB1 Antibody ITGB1/3613 in Human Kidney IHC. Immunohistochemistry testing of FFPE human kidney tissue with ITGB1 antibody clone ITGB1/3613. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling before testing. Strong staining is visible in the glomerulus and surrounding renal structures, with prominent membranous and cytoplasmic labeling. This CD29 Monoclonal Antibody demonstrates detection of integrin beta 1 in human kidney tissue.



ITGB1 Antibody ITGB1/3613 in Human Lung IHC. Immunohistochemistry testing of FFPE human lung tissue with ITGB1 antibody clone ITGB1/3613. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling before testing. Strong staining outlines alveolar structures throughout the field, producing a predominantly membranous pattern. The staining demonstrates tissue localization of CD29 using this CD29 Monoclonal Antibody.



Purified ITGB1 Antibody ITGB1/3613 SDS-PAGE. SDS-PAGE analysis of purified, BSA-free ITGB1 antibody clone ITGB1/3613 under reducing (R) and non-reducing (NR) conditions. The reduced sample shows the expected immunoglobulin heavy and light chains at approximately 50 kDa and 25 kDa, while the non-reduced antibody migrates predominantly as an intact species near 150 kDa. The gel demonstrates the integrity and purity of the CD29 Monoclonal Antibody preparation.



ITGB1 Antibody ITGB1/3613 Western Blot of Human Kidney. Western blot testing of human kidney tissue lysate with ITGB1 antibody clone ITGB1/3613. A strong predominant band is detected at approximately 130 kDa, above the approximately 88 kDa calculated molecular weight of the ITGB1 polypeptide. This higher apparent molecular weight is consistent with extensive glycosylation of mature integrin beta 1. The result demonstrates detection of mature CD29 protein by this CD29 Monoclonal Antibody.

Description

ITGB1 Antibody ITGB1/3613 recognizes integrin beta 1, a transmembrane adhesion receptor subunit encoded by the ITGB1 gene and commonly designated CD29. Integrin beta 1 associates with multiple alpha integrin subunits to form heterodimeric receptors with distinct ligand-binding properties. These beta 1-containing integrins mediate interactions with extracellular matrix proteins and cell-surface ligands, allowing cells to respond dynamically to their surrounding environment.

Integrin beta 1 is a type I transmembrane glycoprotein composed of a large extracellular region, a single transmembrane segment, and a relatively short cytoplasmic tail. Pairing with different alpha subunits produces receptors for extracellular matrix components such as fibronectin, collagen, and laminin. CD29 is therefore a shared beta chain of several integrins, including members historically designated very late antigen (VLA) receptors. Ligand binding and intracellular signaling regulate integrin affinity, clustering, and connections with the cytoskeleton.

ITGB1-containing integrins transmit signals bidirectionally across the plasma membrane. Inside-out signaling can alter extracellular ligand-binding activity, while ligand engagement initiates outside-in signaling that influences cytoskeletal organization and intracellular pathways. Through these mechanisms, integrin beta 1 contributes to cell adhesion, spreading, migration, proliferation, differentiation, survival, and tissue organization. Its interactions with focal adhesion-associated proteins also help coordinate mechanical and biochemical signals between cells and the extracellular matrix.

CD29 is broadly expressed and has important roles in epithelial, endothelial, stromal, hematopoietic, and other cell populations. Altered ITGB1 expression or signaling is investigated in cancer biology, where beta 1 integrins can influence tumor cell adhesion, migration, invasion, survival, and interactions with the tumor microenvironment. Integrin beta 1 is also studied in immune cell trafficking, tissue development, wound repair, stem cell biology, and mechanisms of cell-matrix communication.

Clone ITGB1/3613 is a monoclonal antibody directed against human integrin beta 1. The CD29 designation provides an

established cell-surface nomenclature for ITGB1 and is widely used in immunology and cell biology research.

An ITGB1 Antibody can be used to investigate expression and localization of integrin beta 1, while a CD29 Monoclonal Antibody provides a monoclonal reagent for studies using the established CD designation of this adhesion receptor subunit.

For additional antibodies targeting cell-surface differentiation antigens, see our CD Antibodies page.

Application Notes

Optimal dilution of the ITGB1 Antibody ITGB1/3613 / CD29 Monoclonal Antibody should be determined by the researcher.

Immunogen

Purified human beta 1 integrin from HT1080 fibrosarcoma cells was used as the immunogen for the ITGB1 Antibody ITGB1/3613.

Storage

Store the ITGB1 Antibody ITGB1/3613 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD29 antibody, Integrin Beta 1 antibody, Fibronectin Receptor Beta Subunit antibody, VLA Beta Chain antibody, Very Late Antigen Beta Chain antibody

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