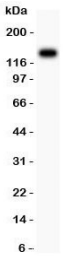
Integrin Beta 1 Antibody / CD29 Polyclonal Antibody (R31512)

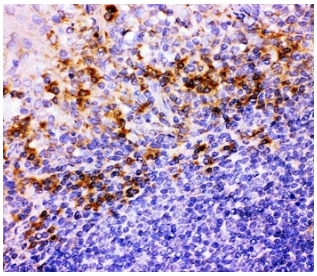
Catalog No.	Formulation	Size
R31512	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

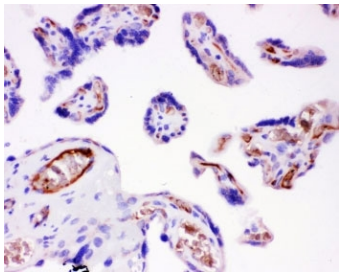
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	3688
Localization	Cell membrane, cytoplasm
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This Integrin Beta 1 Antibody / CD29 Polyclonal Antibody is available for research use only.



ntegrin Beta 1 Antibody Western Blot of HeLa Cells. Western blot testing of human HeLa cell lysate with Integrin Beta 1 Antibody. A strong, discrete band is visible at approximately 130 kDa, substantially above the approximately 88 kDa predicted molecular weight of the unmodified ITGB1 polypeptide but within the expected 130-150 kDa range for mature glycosylated integrin beta 1. The clean predominant signal supports detection of mature CD29 by this CD29 Polyclonal Antibody.



Integrin Beta 1 Antibody in Human Tonsil IHC. Immunohistochemistry testing of FFPE human tonsil tissue with Integrin Beta 1 Antibody. The image shows heterogeneous brown immunoreactivity among cells within the lymphoid tissue, including strongly stained individual cells and cellular processes against a predominantly hematoxylin-counterstained background. This pattern demonstrates tissue detection of integrin beta 1 using the CD29 Polyclonal Antibody.



Integrin Beta 1 Antibody in Human Placenta IHC. Immunohistochemistry testing of FFPE human placenta tissue with Integrin Beta 1 Antibody. Brown immunoreactivity prominently outlines trophoblastic surfaces of the chorionic villi, producing a strong membranous pattern with additional cellular staining. The localization is consistent with the membrane-associated biology of ITGB1 and demonstrates detection of CD29 in human placenta using the CD29 Polyclonal Antibody.

Description

Integrin Beta 1 Antibody recognizes integrin beta 1, a transmembrane adhesion receptor subunit encoded by the ITGB1 gene and commonly designated CD29. Integrin beta 1 associates with numerous alpha integrin subunits to form heterodimeric receptors with different ligand-binding properties. These beta 1-containing integrins mediate interactions between cells and extracellular matrix components and contribute to adhesion, migration, signaling, and tissue organization.

Integrin beta 1 is a type I transmembrane glycoprotein containing a large extracellular region, a single transmembrane segment, and a relatively short cytoplasmic tail. Pairing with different alpha subunits produces receptors capable of recognizing extracellular matrix proteins including fibronectin, collagen, and laminin. CD29 also serves as the common beta subunit of several integrins historically designated very late antigen (VLA) receptors.

ITGB1-containing integrins transmit information bidirectionally across the plasma membrane. Inside-out signaling regulates integrin affinity and ligand binding, while extracellular ligand engagement initiates outside-in signals through interactions with cytoskeletal and signaling proteins. These mechanisms influence cell spreading, migration, proliferation, differentiation, survival, and cellular responses to the mechanical properties of the extracellular environment.

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

Integrin beta 1 undergoes extensive post-translational glycosylation. Although the unmodified polypeptide has a predicted molecular weight of approximately 88 kDa, mature glycosylated forms can migrate substantially higher during electrophoresis. This biochemical property is relevant when evaluating ITGB1 protein expression by western blot.

An Integrin Beta 1 Antibody can be used to investigate expression of the ITGB1-encoded adhesion receptor subunit, while a CD29 Polyclonal Antibody provides a polyclonal reagent for studies using its established CD designation.

For an additional monoclonal reagent targeting integrin beta 1, see our ITGB1 Antibody ITGB1/3613 / CD29 Monoclonal Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Integrin Beta 1 Antibody / CD29 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 527-728) was used as the immunogen for this Integrin beta 1 antibody.

Storage

After reconstitution, the Integrin beta 1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ITGB1 antibody, CD29 antibody, Fibronectin Receptor Beta Subunit antibody, VLA Beta Chain antibody, Very Late Antigen Beta Chain antibody

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