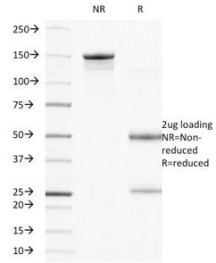
Integrin Beta 4 Antibody UM-A9 / ITGB4 Monoclonal Antibody [clone UM-A9] (V2163)

Catalog No.	Formulation	Size
V2163-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2163-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2163SAF-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 IgG2a, kappa
Clone Name	UM-A9
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	3691
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml
Limitations	This Integrin Beta 4 Antibody UM-A9 / ITGB4 Monoclonal Antibody is available for research use only.



Purified Integrin Beta 4 Antibody UM-A9 SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Integrin Beta 4 Antibody clone UM-A9 under non-reducing (NR) and reducing (R) conditions with a 2 ug antibody load. The non-reduced preparation shows a predominant intact antibody band near 150 kDa, while reduction produces bands at approximately 50 kDa and 25 kDa corresponding to immunoglobulin heavy and light chains. The expected electrophoretic pattern confirms the integrity of the purified mouse monoclonal preparation used as an ITGB4 Monoclonal Antibody.

Description

Integrin Beta 4 Antibody UM-A9 recognizes integrin beta 4, a transmembrane adhesion receptor subunit encoded by the ITGB4 gene and also designated CD104. ITGB4 is structurally distinct from other integrin beta chains and associates predominantly with integrin alpha 6 to form the alpha 6 beta 4 heterodimer. This receptor has important functions in epithelial attachment to basement membranes and is a major component of specialized adhesion structures known as hemidesmosomes.

Integrin beta 4 is a type I transmembrane glycoprotein distinguished by an exceptionally large cytoplasmic domain containing more than 1,000 amino acids. This intracellular region contains four fibronectin type III domains and multiple sites for interactions with cytoskeletal and signaling proteins. Its unusual structure allows alpha 6 beta 4 to provide stable mechanical adhesion while also participating in intracellular signaling pathways that influence cellular behavior.

Within hemidesmosomes, alpha 6 beta 4 connects epithelial cells to the underlying basement membrane. The extracellular portion of the receptor binds laminins, particularly laminin-332, while the ITGB4 cytoplasmic domain interacts with proteins including plectin and BP230. These interactions link the receptor complex to keratin intermediate filaments and help epithelial tissues resist mechanical stress.

CD104 also participates in signaling associated with cell migration, proliferation, survival, and tissue remodeling. Modification of the large ITGB4 cytoplasmic domain can alter interactions with hemidesmosomal proteins and contribute to receptor redistribution during cellular migration. Altered alpha 6 beta 4 expression and signaling have consequently been investigated in epithelial tumor progression, invasion, and changes in cell-matrix adhesion.

Pathogenic variants affecting ITGB4 can disrupt stable epithelial attachment and are associated with forms of junctional epidermolysis bullosa, including disease accompanied by pyloric atresia. These disorders demonstrate the importance of integrin beta 4 in maintaining epithelial-basement membrane adhesion and tissue integrity.

An Integrin Beta 4 Antibody such as clone UM-A9 provides a monoclonal reagent for investigating this distinctive integrin subunit, while an ITGB4 Monoclonal Antibody provides gene-based terminology for studies of CD104, hemidesmosomes, epithelial adhesion, and alpha 6 beta 4 biology.

For a broadly validated antibody targeting this protein, see our CD104 Antibody / ITGB4 Polyclonal Antibody page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Integrin Beta 4 Antibody UM-A9 / ITGB4 Monoclonal Antibody to be titered up or down for optimal performance.

Immunogen

The human squamous cell carcinoma line (UM-SCC1) was used as the immunogen for this Integrin Beta 4 Antibody UM-A9.

Storage

Store the Integrin Beta 4 Antibody UM-A9 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

GP150; ITGB4, CD104 antibody, Integrin beta-4 antibodyCD104 antibody, ITGB4 antibody, Beta 4 Integrin antibody, Integrin beta-4 subunit antibody, GP150 antibody, CD104 antigen antibody

References (2)

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