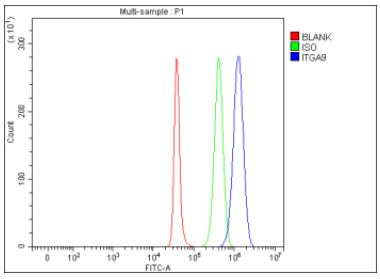
ITGA9 Antibody / Integrin alpha 9 (FY12686)

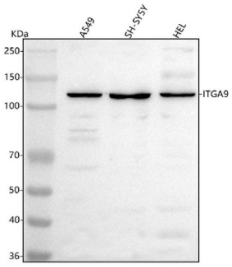
Catalog No.	Formulation	Size
FY12686	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q13797
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This ITGA9 antibody is available for research use only.



Flow Cytometry analysis of SH-SY5Y cells using anti-ITGA9 antibody. Overlay histogram showing SH-SY5Y cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-ITGA9 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of Integrin Alpha-9/ITGA9 using anti-ITGA9 antibody. Lane 1: human whole cell lysates, Lane 2: human SH-SY5Y whole cell lysates, Lane 3: human HEL whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ITGA9 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of Integrin Alpha-9/ITGA9 is at 115 kDa.

Description

ITGA9 antibody detects Integrin alpha-9, a transmembrane receptor that mediates cell adhesion, migration, and signal transduction by binding to extracellular matrix (ECM) ligands such as tenascin-C, osteopontin, and VCAM1. Integrins are heterodimeric proteins composed of alpha and beta subunits; Integrin alpha-9 pairs with the beta-1 subunit to form the alpha9beta1 integrin complex. This receptor is involved in developmental morphogenesis, angiogenesis, epithelial integrity, and immune cell trafficking. The alpha9beta1 integrin recognizes diverse ligands containing the LDV or SVVYGLR motifs and promotes cytoskeletal reorganization and cell movement through activation of focal adhesion kinase and Rho-family GTPases.

Integrin alpha-9 is encoded by the ITGA9 gene located on chromosome 3p22.2. It is expressed in smooth muscle cells, fibroblasts, airway epithelium, and leukocytes. During embryonic development, Integrin alpha-9 contributes to lymphatic valve formation and respiratory system maturation. Loss of ITGA9 function in animal models leads to perinatal lethality due to chylothorax, underscoring its essential role in lymphatic and pulmonary development. In adult tissues, Integrin alpha-9 supports wound healing and inflammation by mediating adhesion of leukocytes to endothelial and epithelial cells.

The ITGA9 antibody is used in cell biology, cancer, and immunology research to study integrin-mediated adhesion and signaling. In immunohistochemistry, it detects membrane-associated staining in epithelial and stromal cells. Western blot analysis identifies a ~130 kilodalton band corresponding to the mature glycosylated protein. Integrin alpha-9 participates in epithelial-mesenchymal transition and tumor metastasis, where increased expression correlates with invasive behavior. Blocking ITGA9 function has been shown to suppress cancer cell migration and angiogenesis, highlighting its potential as a therapeutic target.

Integrin alpha-9 interacts with cytoplasmic partners such as talin and kindlin to transmit bidirectional signaling between the ECM and intracellular environment. Activation of this receptor regulates cellular responses including proliferation, differentiation, and immune recruitment. The ITGA9 antibody enables detailed analysis of these signaling events and provides insight into how integrin networks integrate mechanical and chemical cues during tissue remodeling. NSJ Bioreagents provides a validated ITGA9 antibody for its applications, supporting studies in development, inflammation, and cancer metastasis.

Application Notes

Optimal dilution of the ITGA9 antibody should be determined by the researcher.

Immunogen

E.coli-derived human Integrin alpha-9/ITGA9 recombinant protein (Position: Q526-Q1035) was used as the immunogen for the ITGA9 antibody.

Storage

After reconstitution, the ITGA9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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