abcam

ab27947

Anti-Integrin alpha 9+beta 1 antibody [Y9A2]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing ITGA9 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q13797
Clone number	Y9A2
Purification technique	Affinity purification Protein G
Specificity	Ab27947 recognises alpha9 integrin expressed as a heterodimer in association with the beta1 integrin.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Ab27947 was purified by affinity chromatography, from tissue culture supernatant.

Reactivity data

IP

Expected

Species	Rat, Guinea pig, Human
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt

Expected

Species	Rat
Dilution info	-
Notes	(in 100ul). ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Guinea pig
Dilution info	-
Notes	(in 100ul). ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	(in 100ul). ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-FoFr

Not recommended

Species	Rat, Guinea pig, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Rat, Guinea pig, Human
Dilution info	-
Notes	-

IHC-R

Not recommended

Species	Rat, Guinea pig, Human
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Rat, Guinea pig, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ITGA9

Function	Integrin alpha-9/beta-1 (ITGA9:ITGB1) is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. ITGA9:ITGB1 may play a crucial role in SVEP1/polydom-mediated myoblast cell adhesion (By similarity). Integrin ITGA9:ITGB1 represses PRKCA-mediated L-type voltage-gated channel Ca(2+) influx and ROCK-mediated calcium sensitivity in vascular smooth muscle cells via its interaction with SVEP1, thereby inhibiting vasocontraction (PubMed:35802072).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Notes

This clone (Y9A2) inhibits adhesion of alpha9 expressing cells to N terminal osteopontin.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Integrin alpha 9+beta 1 also known as Integrin α9β1 is a heterodimeric protein that functions as a cell adhesion receptor. It has a molecular mass of approximately 170 kDa. This integrin expressed in various tissues including smooth muscle epithelial tissues and leukocytes facilitates cell adhesion to the extracellular matrix by binding to specific ligands. Integrin α9β1 mediates interactions with several extracellular matrix proteins such as tenascin-C and osteopontin.
Biological function summary	Integrin α9β1 influences cell migration proliferation and survival. It plays significant roles in tissue morphogenesis and repair. As part of the integrin family it interacts with the cytoskeleton and transduces signals that regulate cellular responses to the environment. This integrin forms part of larger protein complexes on the cell surface influencing cellular dynamics through its interaction with intracellular proteins.
Pathways	Integrin α9β1 participates in key signaling cascades such as the MAPK/ERK pathway and the PI3K/Akt pathway. These pathways are essential in cell survival proliferation and migration. Interaction with proteins like FAK (focal adhesion kinase) and paxillin amplifies its signal transduction capabilities connecting external matrix signals to intracellular processes thereby integrating with multiple cellular functions.
Associated diseases and disorders	Integrin α9β1 takes part in the pathology of several conditions. It is implicated in the progression of cancer and chronic inflammatory diseases. Overexpression and dysregulation of Integrin α9β1 often correlate with increased tumor metastasis and inflammation. The integrin associates with matrix metalloproteinases which contribute to the tissue remodeling seen in these disorders highlighting its impact on disease development and progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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