abcam

ab318962

Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28288-84
Purification technique	Affinity purification Protein A
Concentration	0.532 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Dot

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/5000
Notes	-

Not recommended

Species	Recombinant fragment - Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Human, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Recombinant fragment - Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information LAMA5

Function	Binding to cells via a high affinity receptor, laminin is thought to mediate the attachment, migration and organization of cells into tissues during embryonic development by interacting with other extracellular matrix components. Plays a role in the regulation of skeletogenesis, through a mechanism that involves integrin-mediated signaling and PTK2B/PYK2 (PubMed:33242826).

Storage

Shipped at conditions	Conditional Ambient
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
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Laminin alpha 5 (LAMA5) also known as laminin alpha-5 chain is an important component of the basement membrane which provides structural support to tissues. LAMA5 is a subunit of the laminin protein a large heterotrimeric glycoprotein complex involved in numerous cellular processes. The molecular weight of laminin alpha 5 can reach approximately 400 kDa. This protein is expressed widely across various tissues including the kidney lung and skin where it plays a mechanical role by mediating cell adhesion differentiation and migration by forming a scaffold-like structure at the cellular level.
Biological function summary	Laminin alpha 5 participates in the assembly of the laminin-511 complex which is vital for tissue-specific functions and maintaining cellular structures. This complex is important for epithelial and endothelial cell stability ensuring cohesive interactions with integrins and other cellular receptors. Laminin alpha 5 as part of this complex promotes development wound healing and angiogenesis impacting cell survival and regeneration by providing essential biochemical signals through its binding sites.
Pathways	Laminin alpha 5 significantly influences the PI3K/AKT and MAPK pathways which are critical for cell proliferation and survival. Within these pathways LAMA5 interacts with integrin receptors facilitating signal transduction. These pathways further associate laminin alpha 5 with proteins like FAK and Src kinase which mediate downstream signaling events influencing cellular growth and adhesion. These pathways link laminin alpha 5 to diverse cellular functions and regulatory processes.
Associated diseases and disorders	Laminin alpha 5 has implications in diseases such as renal fibrosis and epidermolysis bullosa. Aberrant expression or mutations of LAMA5 can lead to defective basement membrane integrity affecting tissue stability and function. In renal fibrosis alterations in LAMA5 associate with disrupted kidney architecture while in epidermolysis bullosa laminin alpha 5 mutations lead to skin fragility. These conditions can also involve interactions with proteins like collagen IV and integrins contributing to the disease pathology.

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

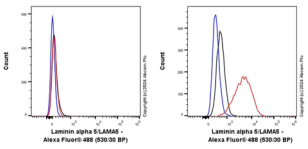
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

4 product images

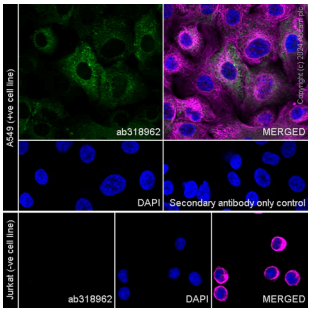


Flow Cytometry (Intracellular) - Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84] (ab318962)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized A549 (human lung carcinoma epithelial cell) (Right) / Jurkat (human T cell leukemia T lymphocyte from peripheral blood) (Left) cells labelling Laminin alpha 5/LAMA5 with ab318962 at 1/5000 dilution (0.1ug) (Red) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: Jurkat.



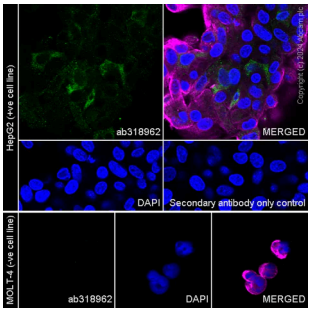
Immunocytochemistry/ Immunofluorescence - Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84] (ab318962)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized A549 (human lung carcinoma epithelial cell) cells labelling Laminin alpha 5/LAMA5 with ab318962 at 1/50 (10.64 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green).

Confocal image showing cytoplasmic staining in A549 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).
Negative control: Jurkat.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



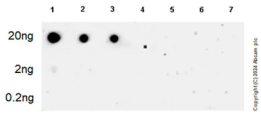
Immunocytochemistry/ Immunofluorescence - Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84] (ab318962)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling Laminin alpha 5/LAMA5 with ab318962 at 1/50 (10.64 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green).

Confocal image showing cytoplasmic staining in HepG2 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Negative control: MOLT-4.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Dot Blot - Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84] (ab318962)

Laminin alpha 5/LAMA5 Dot Blot staining using rabbit Anti-Laminin alpha 5/LAMA5 antibody

Dot blot analysis of Laminin alpha 5/LAMA5 using ab318962 at 1:1000 (0.532 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:20,000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with other human LAMA family members.

All lanes:
Dot Blot - Anti-Laminin alpha 5/LAMA5 antibody [EPR28288-84] (ab318962) at 1/1000 dilution

Lane 1:
Human LAMA5 fragment

Lane 2:
Human recombinant laminin 511

Lane 3:
Human recombinant laminin 521

Lane 4:
Human recombinant laminin 121

Lane 5:
Human recombinant laminin 221

Lane 6:
Human recombinant laminin 332

Lane 7:
Human recombinant laminin 411

Secondary

All lanes:
Dot Blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Exposure time: 180s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.