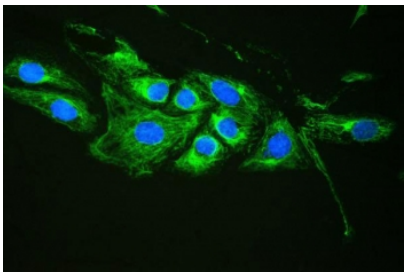
Plectin Antibody (R32233)

Catalog No.	Formulation	Size
R32233	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

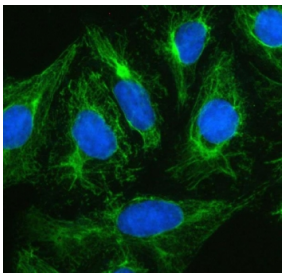
Citations (1)

Bulk quote request

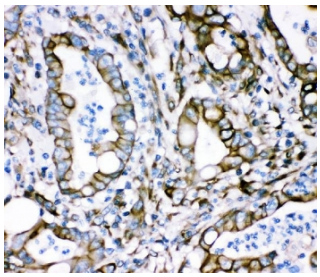
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q15149
RRID	AB_2938586
Localization	Cytoplasmic, cytoskeletal
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Immunofluorescence: 5ug/ml
Limitations	This Plectin antibody is available for research use only.



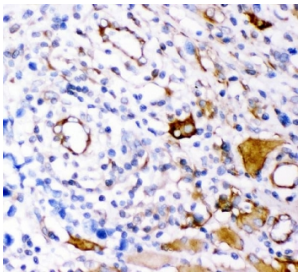
Plectin Antibody U-2 OS Cells IF. Immunofluorescent staining of human U-2 OS cells demonstrates plectin expression using a Plectin antibody (green). Plectin is a large cytolinker protein that organizes intermediate filaments, microtubules, and actin networks to maintain cellular architecture and mechanical stability. Extensive cytoplasmic filamentous staining is observed throughout the cells, consistent with the role of plectin in coordinating cytoskeletal organization and intracellular scaffolding. DAPI nuclear counterstain identifies cell nuclei (blue). Heat induced epitope retrieval was performed by boiling sections in pH 6 10 mM citrate buffer for 20 minutes followed by cooling prior to staining. These results support the utility of Plectin Antibody for studies of cytoskeletal organization, cell adhesion, mechanotransduction, and cancer biology.



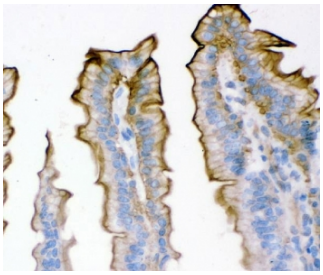
Plectin Antibody U-2 OS Cytoskeleton IF. Immunofluorescent staining of human U-2 OS cells demonstrates plectin expression using a Plectin antibody (green). Plectin is a cytolinker protein that interconnects intermediate filaments, microtubules, and actin filaments to maintain cellular architecture and mechanical stability. A dense filamentous network extending throughout the cytoplasm and into cellular processes is observed, highlighting the role of plectin in organizing the cytoskeleton and supporting cell shape. DAPI was used as a nuclear counterstain (blue). Heat induced epitope retrieval was performed by boiling sections in pH 6 10 mM citrate buffer for 20 minutes followed by cooling prior to staining. These results support the utility of Plectin Antibody for studies of cytoskeletal dynamics, cell adhesion, mechanotransduction, and tumor cell biology.



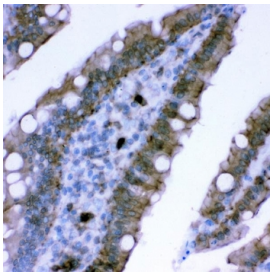
Plectin Antibody Intestinal Cancer IHC. Immunohistochemical staining of FFPE human intestinal cancer demonstrates plectin expression using a Plectin antibody. Plectin is a large cytolinker protein that connects intermediate filaments with membrane associated complexes to maintain cellular architecture and mechanical stability. Strong membranous and cytoplasmic staining is observed in malignant glandular epithelial cells, consistent with the elevated expression and altered cytoskeletal organization associated with tumor progression. Heat induced epitope retrieval was performed by boiling paraffin sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to staining. These results support the utility of Plectin Antibody for studies of cell adhesion, cytoskeletal dynamics, and cancer biology.



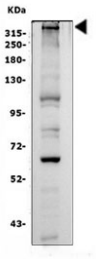
Plectin Antibody Lung Cancer IHC. Immunohistochemical staining of FFPE human lung cancer demonstrates plectin expression using a Plectin antibody. Plectin is a multifunctional cytolinker protein that stabilizes intermediate filaments and anchors cytoskeletal networks to membrane associated complexes. Heterogeneous cytoplasmic and membranous staining is observed in subsets of malignant cells and tumor associated structures, consistent with the dynamic changes in cellular architecture and adhesion that accompany cancer progression. Heat induced epitope retrieval was performed by boiling paraffin sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to staining. These findings support the utility of Plectin Antibody for investigations of cytoskeletal organization, mechanotransduction, and tumor biology.



Plectin Antibody Mouse Intestine IHC. Immunohistochemical staining of FFPE mouse intestine demonstrates plectin expression using a Plectin antibody. Plectin is a major cytoskeletal linker protein that connects intermediate filaments to membrane adhesion complexes and contributes to epithelial integrity and resistance to mechanical stress. Prominent apical and lateral membranous staining is observed in intestinal epithelial cells lining the villi, highlighting the role of plectin in maintaining tissue architecture and cell polarity. Heat induced epitope retrieval was performed by boiling paraffin sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to staining. These results support the utility of Plectin Antibody for studies of epithelial biology, cytoskeletal organization, and tissue homeostasis.



Plectin Antibody Rat Intestinal Epithelium IHC. Immunohistochemical staining of FFPE rat intestine demonstrates plectin expression using a Plectin antibody. Plectin is a versatile cytolinker protein that anchors intermediate filaments to membrane associated complexes and helps preserve epithelial architecture under conditions of mechanical stress. Distinct cytoplasmic and circumferential membranous staining is observed in absorptive epithelial cells lining the intestinal villi, consistent with the localization of plectin within junctional and cytoskeletal networks. Heat induced epitope retrieval was performed by boiling paraffin sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to staining. These results support the utility of Plectin Antibody for investigations of epithelial integrity, cytoskeletal organization, and tissue homeostasis.



Plectin Antibody HeLa Cells WB. Western blot analysis of human HeLa cell lysate demonstrates plectin expression using a Plectin antibody. Plectin is a giant cytolinker protein that organizes intermediate filaments, microtubules, and actin networks to maintain cellular architecture and mechanical stability. A strong high molecular weight band is detected above 315 kDa, corresponding to the expected migration pattern of full length plectin, which has a predicted molecular weight of approximately 532 kDa. Additional lower molecular weight bands may represent proteolytic fragments or alternatively processed forms commonly observed with large cytoskeletal proteins. These results support the utility of Plectin Antibody for studies of cytoskeletal organization, cell adhesion, mechanotransduction, and cancer biology.

Description

Plectin Antibody recognizes plectin, a large cytolinker protein that belongs to the plakin family and plays a central role in maintaining cellular architecture and mechanical stability. Plectin functions as a versatile scaffold that interconnects intermediate filaments, microtubules, and actin microfilaments, thereby coordinating cytoskeletal organization and preserving tissue integrity. Through its numerous isoforms and binding partners, plectin contributes to cell shape, adhesion, migration, and intracellular signaling. The protein is widely expressed in epithelial cells, muscle, nerve, and connective tissues, where it supports structural resilience and cellular homeostasis.

Plectin is a major component of hemidesmosomes and other adhesion complexes that anchor cells to the extracellular matrix. By linking keratin filaments to transmembrane proteins such as integrins, plectin helps stabilize epithelial tissues exposed to mechanical stress. In muscle cells, plectin connects intermediate filaments with sarcomeres, mitochondria, and the nuclear envelope, contributing to proper contractile function and organelle positioning. These interactions are essential for maintaining tissue integrity and facilitating cellular responses to mechanical forces.

Mutations or altered expression of plectin are associated with a variety of inherited disorders collectively known as plectinopathies, including epidermolysis bullosa simplex with muscular dystrophy, congenital myasthenic syndromes, and cardiomyopathies. Dysregulation of plectin has also been implicated in cancer progression, where altered cytoskeletal organization and cell motility influence invasion and metastasis. Increased plectin expression has been reported in pancreatic cancer, ovarian cancer, prostate cancer, and other malignancies, making the protein an emerging biomarker and therapeutic target.

Beyond its structural functions, plectin participates in signal transduction, mitochondrial dynamics, and cellular stress responses. Interactions with kinases, membrane receptors, and cytoskeletal proteins enable plectin to integrate mechanical and biochemical signals that regulate migration, proliferation, and differentiation. Because plectin serves as a key organizer of the cytoskeleton and adhesion machinery, it has become an important target for studies of cell biology, muscle physiology, and disease mechanisms.

Plectin Antibody is useful for investigations of cytoskeletal organization, cell adhesion, muscle biology, and cancer progression. Detection of endogenous plectin provides a valuable tool for studies of intermediate filament networks, mechanotransduction, and diseases associated with defects in cellular architecture.

Explore our Cell Biology Antibodies page to discover Plectin antibodies and other regulators of cytoskeletal organization, cell adhesion, and intracellular architecture.

Application Notes

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

Immunogen

Amino acids RFIEQEKAKLEQLFQDEVAKAQQLREEQ of human Plectin were used as the immunogen for the Plectin antibody.

Storage

After reconstitution, the Plectin 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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