abcam

ab239916

Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR357(2)
Purification technique	Affinity purification Protein A
Dissociation constant	7.4×10^{-11} M
Concentration	1.034 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Expected

Species	Mouse, Human

Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-

Notes	Antigen retrieval and the use of an HRP/AP polymerized secondary antibody is recommended for enhanced staining.

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information CTNND1

Function	Key regulator of cell-cell adhesion that associates with and regulates the cell adhesion properties of both C-, E- and N-cadherins, being critical for their surface stability (PubMed:14610055, PubMed:20371349). Promotes localization and retention of DSG3 at cell-cell junctions, via its interaction with DSG3 (PubMed:18343367). Beside cell-cell adhesion, regulates gene transcription through several transcription factors including ZBTB33/Kaiso2 and GLIS2, and the activity of Rho family GTPases and downstream cytoskeletal dynamics (PubMed:10207085, PubMed:20371349). Implicated both in cell transformation by SRC and in ligand-induced receptor signaling through the EGF, PDGF, CSF-1 and ERBB2 receptors (PubMed:17344476).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239916 is the carrier-free version of ab92514.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Delta 1 Catenin also known as CAS or δ-catenin is a member of the p120-catenin subfamily weighing around 122 kDa. It is predominantly expressed in the central nervous system where it localizes at the synapses. Apart from its neural distribution delta 1 Catenin also appears in epithelial tissues. This protein plays an important role in cell-cell adhesion by interacting with cadherins at the cytoplasmic side of the plasma membrane thereby facilitating the formation and maintenance of adherens junctions.
Biological function summary	Delta 1 Catenin participates in the regulation of synaptic stability and plasticity. As part of a protein complex it binds to the juxtamembrane domain of cadherins influencing actin cytoskeletal dynamics. Through this interaction delta 1 Catenin modulates signal transduction pathways that are essential for neuronal differentiation and synapse formation. In epithelial cells it is also involved in creating cell shapes and promoting tissue integrity.
Pathways	Delta 1 Catenin is essential in the Wnt signaling and Rho GTPase pathways. Within these pathways its interaction with E-cadherin and other catenins influences gene expression and cellular behaviors like migration and proliferation. The Wnt signaling pathway includes proteins such as β-catenin which works alongside delta 1 Catenin to regulate transcriptional activities pivotal for developmental processes and cancer progression.
Associated diseases and disorders	Delta 1 Catenin has associations with neurodegenerative diseases and certain cancers. In Alzheimer's disease alterations in delta 1 Catenin may disrupt synaptic connectivity contributing to cognitive decline. In cancer particularly prostate and colorectal its interaction with proteins like β-catenin potentially leads to changes in

cell adhesion and metastasis. Such involvement makes delta 1 Catenin a significant target for therapeutic intervention.

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

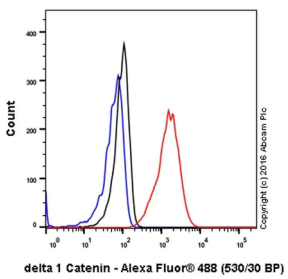
We do not recommend this combination. It is not covered by our product promise.

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.

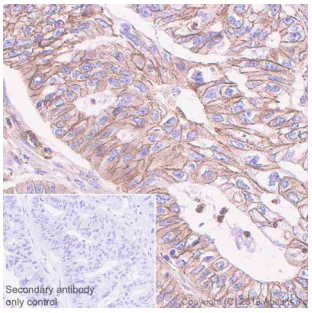
6 product images



Flow Cytometry (Intracellular) - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

Delta 1 Catenin/CAS Flow Cytometry (Intracellular) staining using rabbit Anti-delta 1 Catenin/CAS antibody

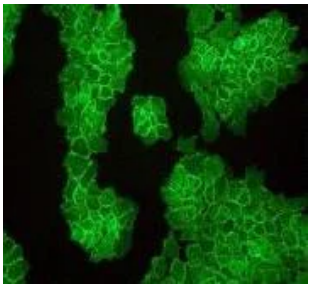
Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) cells labeling delta 1 Catenin/CAS with unpurified ab92514 at 1/20 dilution (10µg/ml) (Red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) was used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92514).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

Delta 1 Catenin/CAS Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-delta 1 Catenin/CAS antibody

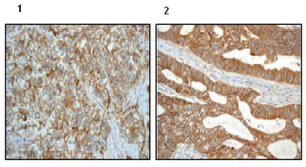
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian cancer tissue sections labeling delta 1 Catenin/CAS with purified ab92514 at 1:50 dilution (1.84 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92514).



Immunocytochemistry/ Immunofluorescence - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

Delta 1 Catenin/CAS Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-delta 1 Catenin/CAS antibody

A431 (Human epidermoid carcinoma cell line) cells stained for delta 1 Catenin/CAS using unpurified ab92514 at a dilution of 1/100 in ICC/IF.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92514).

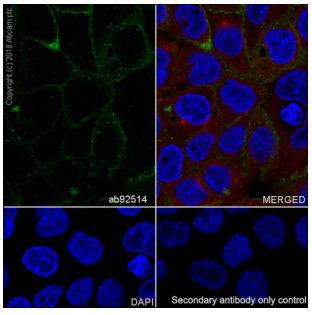


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

Delta 1 Catenin/CAS Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-delta 1 Catenin/CAS antibody

Paraffin embedded human breast carcinoma tissue (panel 1) and human colonic adenocarcinoma tissue (panel 2) labeled with unpurified ab92514 at 1/100 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92514).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

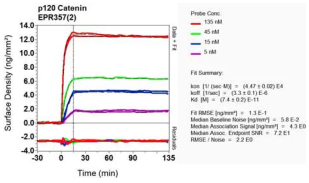


Immunocytochemistry/ Immunofluorescence - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

Delta 1 Catenin/CAS Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-delta 1 Catenin/CAS antibody

Immunocytochemistry/ Immunofluorescence analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling delta 1 Catenin/CAS with purified ab92514 at 1:50 dilution (2.2 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were

counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92514).



OI-RD Scanning - Anti-delta 1 Catenin/CAS antibody [EPR357(2)] - BSA and Azide free (ab239916)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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