abcam

ab313565

Anti-UNC5B antibody [EPR26173-186]

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
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26173-186
Purification technique	Affinity purification Protein A
Concentration	0.494 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Mouse
Dilution info	1/1000
Notes	The ~130 kDa band corresponds to the glycosylated full-length protein (PMID: 36670464). Bands observed between ~50–75 kDa represent proteolytically cleaved fragments (PMID: 21460185; PMID: 33351190; PMID: 32929029).

Species	Human
Dilution info	1/1000
Notes	The ~130 kDa band corresponds to the glycosylated full-length protein (PMID: 36670464). Bands observed between ~50–75 kDa represent proteolytically cleaved fragments (PMID: 21460185; PMID: 33351190; PMID: 32929029).

Species	Mouse
Dilution info	1/1000
Notes	The ~130 kDa band corresponds to the glycosylated full-length protein (PMID: 36670464). Bands observed between ~50–75 kDa represent proteolytically cleaved fragments (PMID: 21460185; PMID: 33351190; PMID: 32929029).

Species	Rat
Dilution info	1/1000
Notes	The ~130 kDa band corresponds to the glycosylated full-length protein (PMID: 36670464). Bands observed between ~50–75 kDa represent proteolytically cleaved fragments (PMID: 21460185; PMID: 33351190; PMID: 32929029).

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50

Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Mouse
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human, Transfected cell lysate - Mouse
Dilution info	-
Notes	-

Target data

See full target information Unc5b

Function	Receptor for netrin required for axon guidance. Mediates axon repulsion of neuronal growth cones in the developing nervous system upon ligand binding. Axon repulsion in growth cones may be caused by its association with DCC that may trigger signaling for repulsion (By similarity). Functions as a netrin receptor that negatively regulates vascular branching during angiogenesis (PubMed:15510105). Mediates retraction of tip cell filopodia on endothelial growth cones in response to netrin (PubMed:15510105). It also acts as a dependence receptor required for apoptosis induction when not associated with netrin ligand. Mediates apoptosis by activating DAPK1. In the absence of NTN1, activates DAPK1 by reducing its autoinhibitory phosphorylation at Ser-308 thereby increasing its catalytic activity (By similarity).

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	UNC5B also referred to as Unc-5 homolog B is a member of the UNC5 family of Netrin receptors. This protein acts mechanically as a dependence receptor that modulates axon guidance by mediating repulsion of axons away from the source of its ligand Netrin-1. UNC5B has a molecular mass around 110 kDa. Scientists observe the expression of UNC5B predominantly in endothelial cells and neuronal tissues indicating its role in vascular and nervous system development.
Biological function summary	Scientists understand UNC5B to mediate the anti-angiogenic effects within tissues. It is an essential component of the signaling pathways that govern apoptosis in response to cellular conditions. UNC5B forms part of a larger receptor complex with Netrin-1 which influences cellular directionality and guidance by affecting cytoskeletal dynamics.
Pathways	The UNC5B receptor prominently participates in the Netrin signaling pathway. Within this pathway UNC5B interacts with other proteins such as DCC (deleted in colorectal cancer) that are involved in axonal guidance and neuronal navigation. It also plays a part in the apoptotic signaling pathways which are important for regulating cell survival and programmed cell death.
Associated diseases and disorders	Researchers associate UNC5B with cancer progression and neurodevelopmental disorders. The regulation of UNC5B is important in the suppression of tumor angiogenesis where its interaction with Netrin-1 can impact cancer cell vascular supply. Additionally misregulation of its pathway might contribute to conditions such as autism spectrum disorders where proteins like DCC interact with it indicating a potential role in neurodevelopmental pathologies.

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

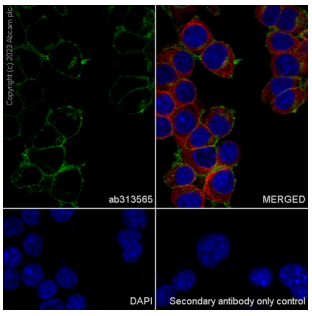
We do not recommend this combination. It is not covered by our product promise.

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.

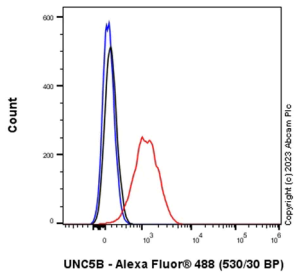
Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



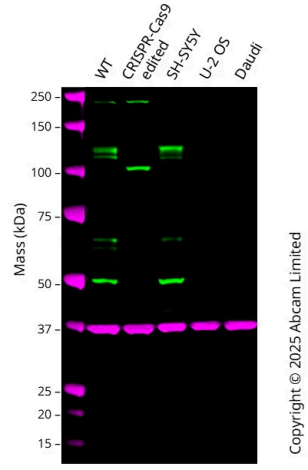
Immunocytochemistry/ Immunofluorescence - Anti-UNC5B antibody [EPR26173-186] (ab313565)

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling UNC5B with ab313565 at 1/50 (10.56 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 membranous staining in Neuro-2a cells.Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). 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.



Flow Cytometry (Intracellular) - Anti-UNC5B antibody [EPR26173-186] (ab313565)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling UNC5B with ab313565 at 1/50 dilution (1 ug)/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). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565)

UNC5B Western blot staining using rabbit Anti-UNC5B antibody

Western blot: Anti-UNC5B antibody [EPR26173-186] ab313565 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 120, 50 kDa in Wild-type U-87 MG cell lysates with a truncated product observed at 100 kDa in CRISPR-Cas9 Edited cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565) at 1/1000 dilution

Lane 1:
Wild-type U-87 MG (UNBOILED) whole cell lysate at 20 µg

Lane 2:

UNC5B knockout U-87 MG (UNBOILED) whole cell lysate at 20 µg

Lane 3:
SH-SY5Y (UNBOILED) whole cell lysate at 20 µg

Lane 4:
U-2 OS (UNBOILED) whole cell lysate at 20 µg

Lane 5:
Daudi (UNBOILED) whole cell lysate at 20 µg

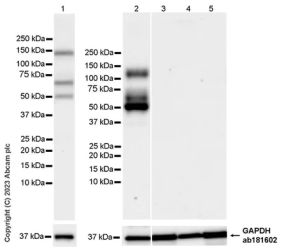
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 104 kDa

Observed band size: 120 kDa, 50 kDa



Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565)

UNC5B Western blot staining using rabbit Anti-UNC5B antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Negative control: Daudi, Raji(PMID:12655055), HL-60 (PMID:12655055, PMID:25171009).

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution.

All lanes:
Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565) at 1/1000 dilution

Lane 1:
Human brain tissue lysate at 20 µg

Lane 2:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Daudi (human Burkitts lymphoma lymphoblast) whole cell lysate at 20 µg

Lane 4:
HL-60 (human Acute Promyelocytic Leukemia promyeloblast) whole cell lysate at 20 µg

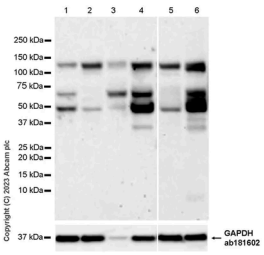
Lane 5:
Raji (human Burkitts lymphoma B lymphocyte) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 65 kDa, 130 kDa

Exposure time: 26s



Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565)

UNC5B Western blot staining using rabbit Anti-UNC5B antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 180 seconds
All lanes:
Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565) at 1/1000 dilution

Lane 1:
Mouse spinal cord tissue lysate at 20 µg

Lane 2:
Mouse brain tissue lysate at 20 µg

Lane 3:
bEnd.3 (mouse brain endothelial cell) while cell lysate at 20 µg

Lane 4:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 5:
Rat brain tissue lysate at 20 µg

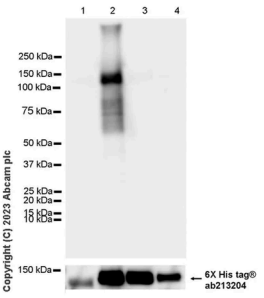
Lane 6:
C6 (rat glial tumor glial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 65 kDa, 130 kDa

Exposure time: 180s



Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565)

Blocking and diluting buffer and concentration: 5% NFDM/TBST This antibody has no cross reaction with mouse UNC5A, UNC5C and UNC5D. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. Exposure time: 3 seconds
All lanes:
Western blot - Anti-UNC5B antibody [EPR26173-186] (ab313565) at 1/1000 dilution

Lane 1:
293T transfected with a mouse UNC5A expression vector containi a His tag whole cell lysate at 40 µg

Lane 2:
293T transfected with a mouse UNC5B vector containi a His tag whole cell lysate at 2 µg

Lane 3:
293T transfected with a mouse UNC5C vector containi a His tag whole cell lysate at 10 µg

Lane 4:
293T transfected with a mouse UNC5D vector containi a His tag whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 130 kDa

Exposure time: 3s

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