abcam

ab236071

Anti-Syntenin antibody [EPR8102] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR8102
Purification technique	Affinity purification Protein A
Dissociation constant	1.24 x 10^{-10} M
Concentration	1.024 - 1.052 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information SDCBP

Function	Multifunctional adapter protein involved in diverse array of functions including trafficking of transmembrane proteins, neuro and immunomodulation, exosome biogenesis, and tumorigenesis (PubMed:26291527). Positively regulates TGFB1-mediated SMAD2/3 activation and TGFB1-induced epithelial-to-mesenchymal transition (EMT) and cell migration in various cell types. May increase TGFB1 signaling by enhancing cell-surface expression of TGFR1 by preventing the interaction between TGFR1 and CAV1 and subsequent CAV1-dependent internalization and degradation of TGFR1 (PubMed:25893292). In concert with SDC1/4 and PDCD6IP, regulates exosome biogenesis (PubMed:22660413). Regulates migration, growth, proliferation, and cell cycle progression in a variety of cancer types (PubMed:26539120). In adherens junctions may function to couple syndecans to cytoskeletal proteins or signaling components. Seems to couple transcription factor SOX4 to the IL-5 receptor (IL5RA) (PubMed:11498591). May also play a role in vesicular trafficking (PubMed:11179419). Seems to be required for the targeting of TGFA to the cell surface in the early secretory pathway (PubMed:10230395).

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

ab236071 is the carrier-free version of ab133267.

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	Syntenin also known as syndecan binding protein (SDCBP) is a multifunctional adaptor protein with a molecular weight of approximately 32 kDa. It typically finds expression in various tissues with high levels noted in the brain placenta and kidney. Mechanically syntenin facilitates cellular signal transduction by interacting with the cytoplasmic domains of syndecans therefore playing a vital role in modulating those signals. Notably syntenin associates with the actin cytoskeleton impacting cell shape and motility.
Biological function summary	Syntenin regulates important cellular processes such as cell adhesion migration and intracellular trafficking. It often associates with protein complexes like those formed with PDZ domain-containing proteins enhancing its ability to link and organize diverse cellular pathways. By influencing these cellular processes syntenin has an impact on tissue development and repair mechanisms. This protein's interaction with the cytoskeleton and membrane-bound molecules allows it to act as an essential mediator in cellular communication.
Pathways	Syntenin is integral to the Wnt and TGF-beta signaling pathways which regulate cell growth and differentiation. Syntenin interacts with proteins such as β-catenin and Smad3 within these pathways linking extracellular signaling cues to specific intracellular responses. These interactions highlight syntenin's role in modulating gene expression and maintaining cellular homeostasis especially in processes like embryogenesis and tissue regeneration.
Associated diseases and disorders	Syntenin holds significance in cancer progression and neurodegenerative diseases. Its overexpression or altered function correlates with increased metastasis in various cancers associated with proteins like syndecan-1 and matrix metalloproteinases. In neurodegeneration dysregulated syntenin expression influences signaling pathways potentially contributing to disorders like Alzheimer's disease. Understanding syntenin's role in these conditions might lead to more targeted therapeutic strategies and improved disease management.

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.

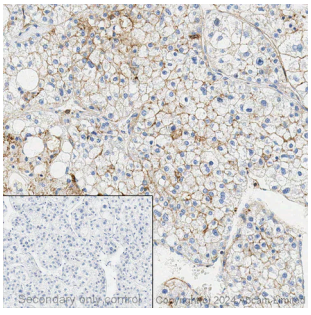
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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15 product images



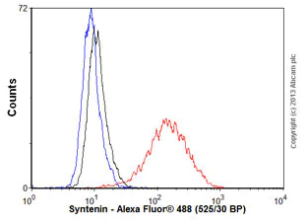
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

This data was developed using ab133267, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of formalin fixed paraffin embedded human liver carcinoma labelling Syntenin with ab133267 at a concentration of 0.01µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 32mins.

ab133267 Anti-Syntenin antibody [EPR8102] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

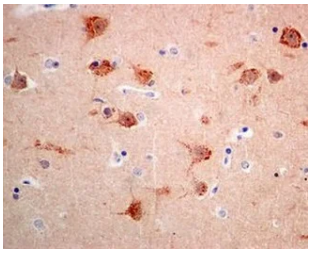
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual).



Flow Cytometry (Intracellular) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Flow Cytometry (Intracellular) staining using rabbit Anti-Syntenin antibody

Overlay histogram showing SHSY-5Y cells stained with unpurified ab133267 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab133267, 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SHSY-5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

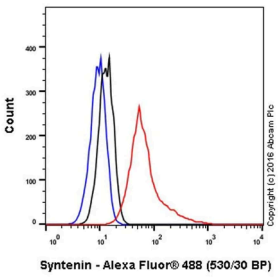


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Syntenin antibody

Immunohistochemical analysis of Syntenin in paraffin embedded Human brain tissue, using unpurified ab133267 at a 1/50 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

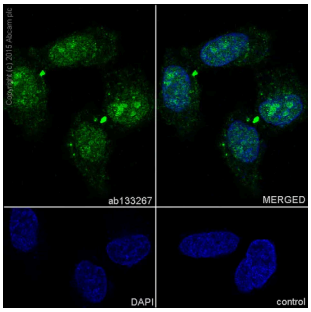
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Flow Cytometry (Intracellular) staining using rabbit Anti-Syntenin antibody

Intracellular Flow Cytometry analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling Syntenin with purified ab133267 at 1/50 (red). Cells were fixed with 4% paraformaldehyde. A goat anti rabbit IgG (Alexa Fluor® 488) 1/2000 was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

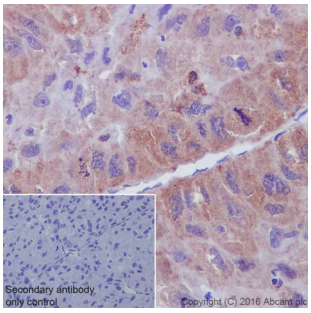


Immunocytochemistry/ Immunofluorescence - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Syntenin antibody

ab133267 staining Syntenin in HeLa (human cervix adenocarcinoma) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/500. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a dilution of 1/1000. DAPI was used as a nuclear counterstain. **Negative control 1**: PBS only.

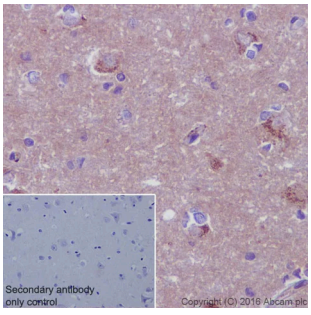
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Syntenin antibody

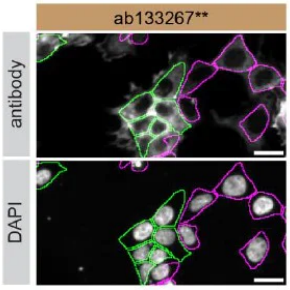
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human hepatocellular carcinoma tissue labeling Syntenin with purified ab133267 at 1/50 dilution. Heat mediated antigen retrieval was performed using EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Syntenin antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human cerebral cortex tissue labeling Syntenin with purified ab133267 at 1/50 dilution. Heat mediated antigen retrieval was performed using EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

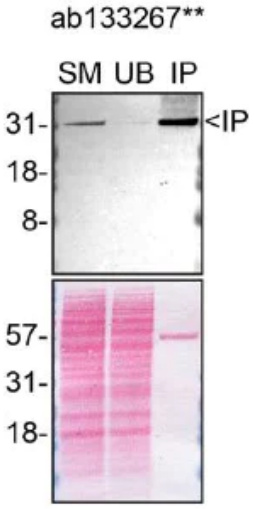


Immunocytochemistry/ Immunofluorescence - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Syntenin antibody

This image was produced using ab133267, the same clone but in a different buffer formulation. ab133267 was shown to react with SDCBP in wild-type HAP1 cells in immunocytochemistry with loss of signal observed in a SDCBP siRNA knockdown cell line. Wild-type and siRNA knockdown cells were mixed and pelleted at a 1:1 ratio on coverslips. The cells were fixed with 4% paraformaldehyde (15 min) then permeabilized with 0.1% Triton X-100 (10min) and then blocked with 1x PBS, 0.01% Triton X-100, 5% BSA, 5% NGS. The cells were then incubated with ab133267 at 1/500 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat anti-rabbit secondary antibody to (Alexa Fluor® 555) at 0.5 µg/ml. Acquisition of the green (wild-type), red (antibody staining) and far-red (siRNA knockdown) channels was performed. Representative grayscale images of the red channel are shown. Wild-type and siRNA knockdown cells are outlined with yellow and magenta dashed line, respectively. Schematic representation of the mosaic strategy used is shown on the bottom-right panel. Image was acquired with a Zeiss(LSM-880).

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Immunoprecipitation - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

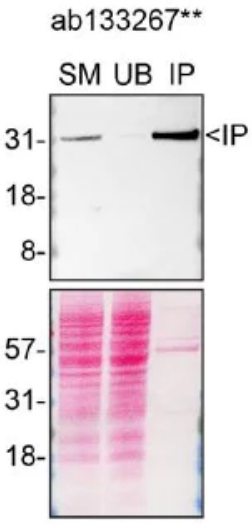
This data was developed using ab133267, the same antibody clone in a different buffer formulation.
Immunoprecipitation of SDCBP in HAP1 culture medium. Culture medium was prepared and immunoprecipitation was performed using 2 µg of ab133267 pre-coupled to Protein A beads. Samples were then washed and processed for western blot.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.

All lanes:
Immunoprecipitation - Anti-Syntenin antibody [EPR8102] (ab133267) at 2 µg

All lanes:
HAP1 culture medium

Observed band size: 31 kDa



Immunoprecipitation - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

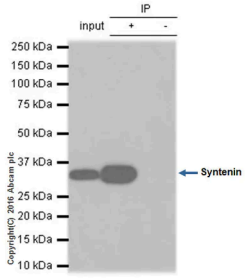
This data was developed using ab133267, the same antibody clone in a different buffer formulation.
Immunoprecipitation of SDCBP in HAP1 cells. Lysates were prepared and immunoprecipitation was performed using 2 µg of ab133267 pre-coupled to Protein A beads. Samples were then washed and processed for western blot.

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All lanes:
Immunoprecipitation - Anti-Syntenin antibody [EPR8102] (ab133267) at 2 µg

All lanes:
HAP1 cells lysates

Observed band size: 31 kDa



Immunoprecipitation - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

ab133267 (purified) at 1/40 immunoprecipitating Syntenin in HeLa whole cell lysate.
Lane 1 (input): HeLa whole cell lysate (10µg)

Lane 2 (+): ab133267 + HeLa whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab133267 in HeLa whole cell lysate.

Blocking buffer and concentration: 5% NFDM/TBST.

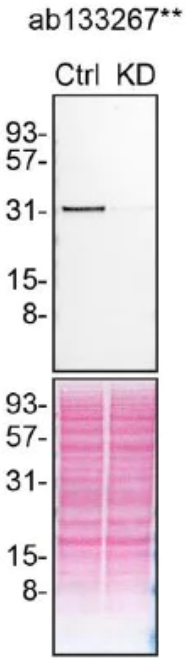
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

All lanes:
Immunoprecipitation - Anti-Syntenin antibody [EPR8102] (ab133267)

Predicted band size: 32 kDa

Observed band size: 32 kDa



Western blot - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Western blot staining using rabbit Anti-Syntenin antibody

This data was developed using ab133267, the same antibody clone in a different buffer formulation.
ab133267 was shown to react with SDCBP in wild-type HAP1 cells in Western blot with loss of signal observed in a SDCBP siRNA knockdown cell line. Cell lysates from wild-type HAP1 transfected with either scrambled siRNA or SDCBP siRNA were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab133267 overnight at 4 °C at a 1/1000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/mL before imaging.

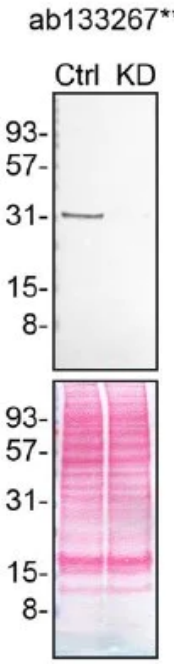
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All lanes:
Western blot - Anti-Syntenin antibody [EPR8102] (ab133267) at 1/1000 dilution

Lane 1:
Wild-type HAP1 transfected with scrambled siRNA control culture medium at 30 µg

Lane 2:
HAP1 transfected with siRNA specifically targeting SDCBP culture medium at 30 µg

Observed band size: 31 kDa



Western blot - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Western blot staining using rabbit Anti-Syntenin antibody

This data was developed using ab133267, the same antibody clone in a different buffer formulation.
ab133267 was shown to react with SDCBP in wild-type HAP1 cells in Western blot with loss of signal observed in a SDCBP siRNA knockdown cell line. Cell lysates from wild-type HAP1 transfected with either scrambled siRNA or SDCBP siRNA were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab133267 overnight at 4 °C at a 1/1000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/mL before imaging.

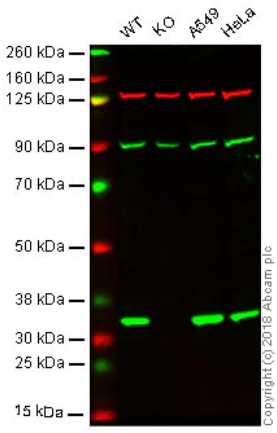
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.

All lanes:
Western blot - Anti-Syntenin antibody [EPR8102] (ab133267) at 1/1000 dilution

Lane 1:
Wild-type HAP1 transfected with scrambled siRNA control lysate at 30 µg

Lane 2:
HAP1 transfected with siRNA specifically targeting SDCBP cell lysate at 30 µg

Observed band size: 31 kDa



Western blot - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

Syntenin Western blot staining using rabbit Anti-Syntenin antibody

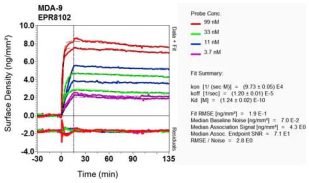
Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Syntenin knockout HAP1 whole cell lysate (20 µg)
Lane 3: A549 whole cell lysate (20 µg)
Lane 4: HeLa whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab133267 observed at 32 kDa. Red - loading control, ab130007, observed at 130 kDa.

ab133267 was shown to recognize Syntenin in wild-type HAP1 cells as signal was lost at the expected MW in Syntenin knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and Syntenin knockout samples were subjected to SDS-PAGE. ab133267 and ab130007 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133267).

All lanes:
Western blot - Anti-Syntenin antibody [EPR8102] (ab133267)

Predicted band size: 32 kDa



OI-RD Scanning - Anti-Syntenin antibody [EPR8102] - BSA and Azide free (ab236071)

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'.