abcam

ab181076

Anti-SEC22B antibody [EPR12335]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR12335
Purification technique	Affinity purification Protein A
Specificity	The rat recommendation is based on the WB results. We do not guarantee IHC-P for rat.
Concentration	0.53 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30

Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/250
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	The rat recommendation is based on the WB results. We do not guarantee IHC-P for rat.

Species	Mouse
Dilution info	-
Notes	The rat recommendation is based on the WB results. We do not guarantee IHC-P for rat.

Species	Rat
Dilution info	-
Notes	The rat recommendation is based on the WB results. We do not guarantee IHC-P for rat.

Target data

See full target information SEC22B

Function	SNARE involved in targeting and fusion of ER-derived transport vesicles with the Golgi complex as well as Golgi-derived retrograde transport vesicles with the ER.

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	SEC22B also known as SEC22 homolog B is a membrane protein involved in vesicular trafficking within cells. It plays an important role in the transport between the endoplasmic reticulum (ER) and the Golgi apparatus. SEC22B belongs to the SNARE (soluble NSF attachment protein receptor) family with a molecular mass of approximately 29 kDa. It is expressed in various tissues with prominent presence in the immune system and neuronal tissues. The protein participates in

	the assembly of vesicle transport machinery important for proper cellular function and compartmentalization.
Biological function summary	SEC22B contributes to the fusion of transport vesicles with target membranes. It acts as part of a SNARE complex facilitating vesicle docking and subsequent membrane fusion through protein-protein interaction. In immune cells SEC22B is essential for antigen presentation. It regulates the trafficking of peptide-MHC complexes to the cell surface essential for adaptive immune response. In neurons the protein ensures efficient neurotransmitter release by managing vesicle cycling and synaptic vesicle fusion.
Pathways	SEC22B integrates into the vesicular transport and secretory pathways. It operates in the ER-Golgi transport route critical in maintaining cellular homeostasis and protein processing. The function of SEC22B involves interaction with other SNARE proteins like VAMP7 and SNAP23 forming SNARE complexes that drive membrane fusion events. This protein also influences the Golgi-to-ER retrograde transport contributing to the protein sorting pathway that recycles specific proteins back to the ER.
Associated diseases and disorders	SEC22B links closely to immune-related conditions and neurodegenerative diseases. Disruption in SEC22B function can impact antigen presentation and immune system efficiency potentially contributing to autoimmune disorders. In neurological contexts altered SEC22B activity may interfere with neurotransmitter release possibly playing a role in conditions such as Alzheimer's disease. Connections with proteins like VAMP7 underline the importance of SEC22B in maintaining cellular integrity across different systems.

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

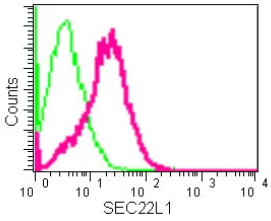
We do not recommend this combination. It is not covered by our product promise.

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.

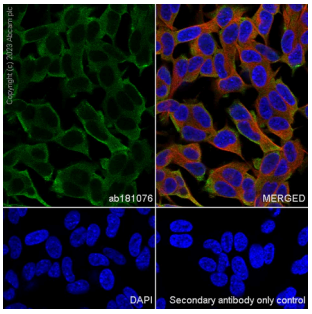
11 product images



Flow Cytometry (Intracellular) - Anti-SEC22B antibody [EPR12335] (ab181076)

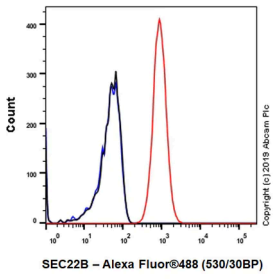
SEC22B Flow Cytometry (Intracellular) staining using rabbit Anti-SEC22B antibody

Intracellular flow cytometric analysis ofSH-SY5Y cells (2% paraformaldehyde-fixed)labeling SEC22Bwith unpurifiedab181076 at 1/50 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SEC22B antibody [EPR12335] (ab181076)

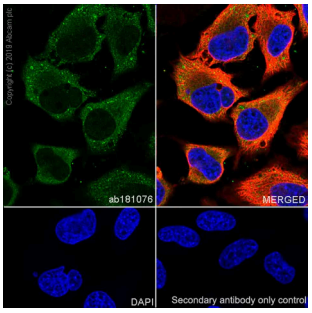
Immunocytochemistry/ Immunofluorescence analysis of SH-SY5Y (human neuroblastoma epithelial cell) cells labeling SEC22B with ab181076 at 1/50dilution (10.6 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) 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. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Anti-SEC22B antibody [EPR12335] (ab181076)

SEC22B Flow Cytometry (Intracellular) staining using rabbit Anti-SEC22B antibody

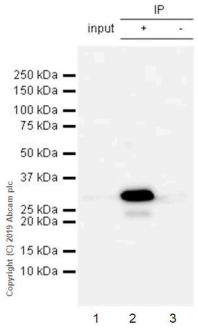
Intracellular Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling SEC22B with purified ab181076 at 1/50 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-SEC22B antibody [EPR12335] (ab181076)

SEC22B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SEC22B antibody

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling SEC22B with purified ab181076 at 1/250 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.

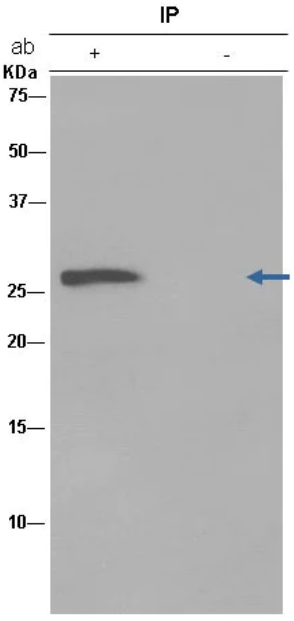


Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076)

ab181076 (purified) at 1/30 dilution (2ug) immunoprecipitating SEC22B in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10ug
Lane 2 (+): ab181076 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab181076 in HeLa whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076)

Predicted band size: 25 kDa, 29 kDa

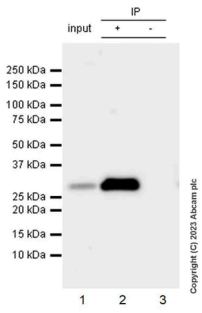
Observed band size: 32 kDa



Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076)

Western blot analysis of immunoprecipitation pellet from HeLa cell lysate (lane 1) or a negative control (lane 2) immunoprecipitated using unpurified ab181076 at 1/30 dilution.
Secondary: Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 dilution.
All lanes:
Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076)

Predicted band size: 25 kDa



Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181076). ab181076 at 1/1000 dilution (2ug in 0.35mg lysates) immunoprecipitating SEC22B in SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate. Lane 1 (input): SH-SY5Y whole cell lysate 10ug Lane 2 (+): ab181076 & SH-SY5Y whole cell lysate Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab181076 in SH-SY5Y whole cell lysate For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution as a secondary antibody. Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-SEC22B antibody [EPR12335] (ab181076) at 1/1000 dilution

All lanes:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 10 µg

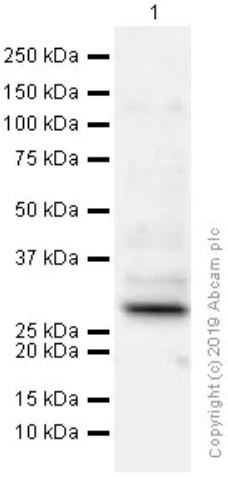
Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Predicted band size: 25 kDa

Observed band size: 28 kDa

Exposure time: 15s



Western blot - Anti-SEC22B antibody [EPR12335] (ab181076)

All lanes:
Western blot - Anti-SEC22B antibody [EPR12335] (ab181076) at 1/5000 dilution

All lanes:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

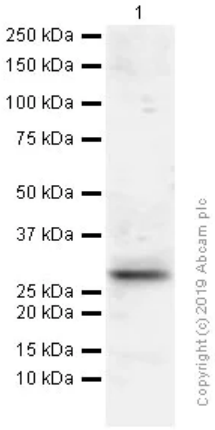
Secondary

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

Predicted band size: 25 kDa

Observed band size: 28 kDa

Western blot - Anti-SEC22B antibody [EPR12335] (ab181076)



All lanes:
Western blot - Anti-SEC22B antibody [EPR12335] (ab181076) at 1/1000 dilution

All lanes:
SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysates at 15 µg

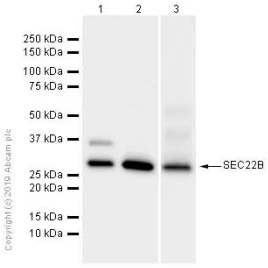
Secondary

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

Predicted band size: 25 kDa

Observed band size: 28 kDa

Western blot - Anti-SEC22B antibody [EPR12335] (ab181076)



All lanes:
Western blot - Anti-SEC22B antibody [EPR12335] (ab181076) at 1/2000 dilution

Lane 1:
Mouse brain lysates at 20 µg

Lane 2:
Mouse spleen lysates at 20 µg

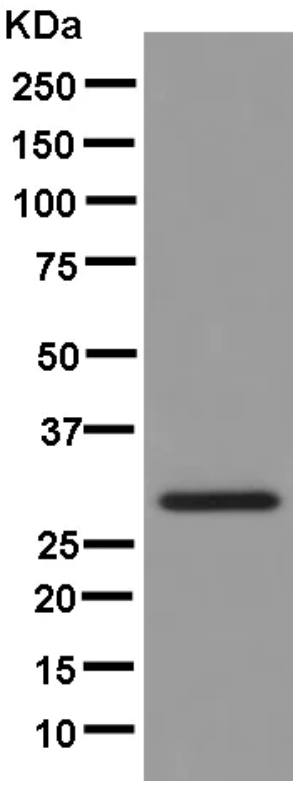
Lane 3:
Rat spleen lysates

Secondary

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

Predicted band size: 25 kDa

Observed band size: 28 kDa



Western blot - Anti-SEC22B antibody [EPR12335] (ab181076)

All lanes:
Western blot - Anti-SEC22B antibody [EPR12335] (ab181076) at 1/2000 dilution

All lanes:
SH-SY5Y cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 25 kDa

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