abcam

ab250116

Anti-SEC23A antibody [EPR13270(B)] - 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	EPR13270(B)
Purification technique	Affinity purification

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Protein transport protein Sec23A

Function	Component of the coat protein complex II (COPII) which promotes the formation of transport vesicles from the endoplasmic reticulum (ER). The coat has two main functions, the physical deformation of the endoplasmic reticulum membrane into vesicles and the selection of cargo molecules for their transport to the Golgi

complex. Required for the translocation of insulin-induced glucose transporter SLC2A4/GLUT4 to the cell membrane (By similarity).

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

ab250116 is the carrier-free version of ab179811.

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	SEC23A also known as Sar1p interaction protein is a component of the COPII-coated vesicle complex responsible for transport from the endoplasmic reticulum (ER) to the Golgi apparatus. With a mass of approximately 85 kDa SEC23A plays a mechanical role in vesicle formation by promoting coat complex assembly which is critical for cargo selection. This protein is expressed ubiquitously in various tissues especially in those with high secretory demands such as pancreas and liver.
Biological function summary	SEC23A functions as part of the COPII complex a group essential for vesicle budding from the ER. The interaction of SEC23A with other COPII components such as SEC24 allows it to select and package secretory proteins efficiently. This activity is not only important for protein trafficking but also for maintaining ER homeostasis and cellular function. Its certain role in the secretion pathway highlights the importance of proper protein sorting in cell and tissue health.
Pathways	SEC23A is an important player in the secretory pathway particularly involved in COPII-mediated vesicular transport. It interacts closely with SEC24 and Sar1 facilitating the transition of proteins through the early secretory pathway. Additionally SEC23A engages with lipid-related pathways contributing to lipid metabolism and transport ensuring the precise delivery of lipid-related proteins across organelles.
Associated diseases and disorders	Mutations in SEC23A associate with cranio-lenticulo-sutural dysplasia (CLSD) a condition marked by skeletal and craniofacial abnormalities. This disorder is linked to the disruption in protein and collagen export due to impaired COPII function involving interactions between SEC23A and SEC24. Furthermore SEC23A is related to pancreatic disorders where dysfunction in COPII-mediated trafficking can lead to improper protein secretion and cellular stress affecting proteins such as insulin and digestive enzymes.

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

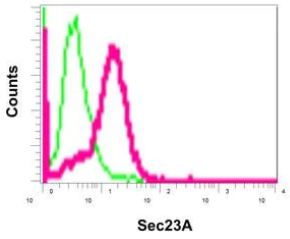
We do not recommend this combination. It is not covered by our product promise.

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.

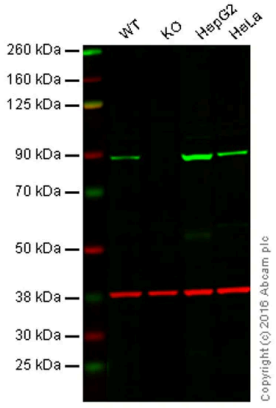
3 product images



Flow Cytometry (Intracellular) - Anti-SEC23A antibody [EPR13270(B)] - BSA and Azide free (ab250116)

SEC23A Flow Cytometry (Intracellular) staining using rabbit Anti-SEC23A antibody

This data was developed using ab179811, the same antibody clone in a different buffer formulation.
Intracellular flow cytometrical analysis of permeabilized HeLa cells labeling SEC23A with ab179811 at 1/10 (red) or a rabbit IgG (negative) (green).



Western blot - Anti-SEC23A antibody [EPR13270(B)] - BSA and Azide free (ab250116)

SEC23A Western blot staining using rabbit Anti-SEC23A antibody

This data was developed using ab179811, the same antibody clone in a different buffer formulation.
Lane 1: Wild-type HAP1 cell lysate (20 µg)

Lane 2: SEC23A knockout HAP1 cell lysate (20 µg)

Lane 3: HepG2 cell lysate (20 µg)

Lane 4: HeLa cell lysate (20 µg)

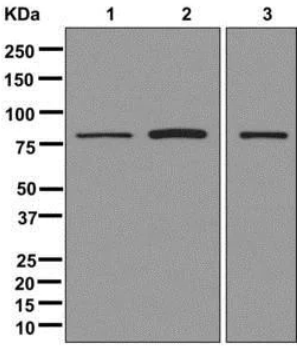
Lanes 1 - 4: Merged signal (red and green). Green - ab179811 observed at 90 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab179811 was shown to specifically react with SEC23A when SEC23A knockout samples were used. Wild-type and SEC23A knockout samples were subjected to SDS-PAGE. ab179811 and ab8245 (loading control to GAPDH) were both diluted 1/10000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.

All lanes:
Western blot - Anti-SEC23A antibody [EPR13270(B)] (ab179811)

Predicted band size: 86 kDa

Observed band size: 90 kDa



Western blot - Anti-SEC23A antibody [EPR13270(B)] - BSA and Azide free (ab250116)

This data was developed using ab179811, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-SEC23A antibody [EPR13270(B)] (ab179811) at 1/10000 dilution

Lane 1:
HeLa cell lysate

Lane 2:
HepG2 cell lysate

Lane 3:
293T cell lysate

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 86 kDa

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