abcam

ab178686

Anti-CHMP1a antibody [EPR11939]

Recombinant | RabMAb

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	EPR11939
Purification technique	Affinity purification Protein A
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CHMP1A

Function

Probable peripherally associated component of the endosomal sorting required for transport complex III (ESCRT-III) which is involved in multivesicular bodies (MVBs) formation and sorting of endosomal cargo proteins into MVBs. MVBs contain intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome and mostly are delivered to lysosomes enabling degradation of membrane proteins, such as stimulated growth factor receptors, lysosomal enzymes and lipids. The MVB pathway appears to require the sequential function of ESCRT-O, -I,-II and -III complexes. ESCRT-III proteins mostly dissociate from the invaginating membrane before the ILV is released. The ESCRT machinery also functions in topologically equivalent membrane fission events, such as the terminal stages of cytokinesis and the budding of enveloped viruses (HIV-1 and other lentiviruses). ESCRT-III proteins are believed to mediate the necessary vesicle extrusion and/or membrane fission activities, possibly in conjunction with the AAA ATPase VPS4. Involved in cytokinesis. Involved in recruiting VPS4A and/or VPS4B to the midbody of dividing cells. May also be involved in chromosome condensation. Targets the Polycomb group (PcG) protein BMI1/PCGF4 to regions of condensed chromatin. May play a role in stable cell cycle progression and in PcG gene silencing.

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	The protein charged multivesicular body protein 1a (CHMP1a) is an essential component of the endosomal sorting complex required for transport (ESCRT)-III also known as chromatin-modifying protein 1A. CHMP1a has a molecular mass of approximately 22 kDa. It shows expression in various tissues with significant presence observed in the brain liver and kidneys. CHMP1a plays a role in the cellular process of membrane remodeling and vesicle trafficking.
Biological function summary	CHMP1a assists in cellular processes like cytokinesis and maintenance of chromatin structure. It is an important part of the ESCRT-III complex which is important for the final stages of cell division and intracellular sorting processes. CHMP1a contributes to the degradation of membrane proteins in lysosomes and the maintenance of proper cell function by controlling the fate of cell surface receptors.
Pathways	The ESCRT-III complex including CHMP1a is involved in the endosomal-lysosomal degradation pathway. This pathway plays a critical role in the down-regulation of cell signaling. CHMP1a associates with proteins such as VPS4 which is involved in the disassembly and recycling of the ESCRT-III complex for repeated use in successive cell cycles. CHMP1a also contributes to the proper functioning of the mitotic spindle assembly ensuring successful mitosis.
Associated diseases and disorders	Defects or mutations in CHMP1a expression can associate with neurodegenerative diseases like frontotemporal dementia. Research shows implications in cancer with

altered CHMP1a expression affecting tumor progression due to disrupted cell division and regulation. The proteins within its pathways such as TSG101 and ALIX also exhibit connections to oncogenic processes further highlighting the role of CHMP1a in pathological conditions.

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

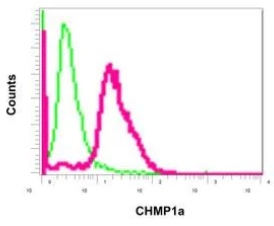
We do not recommend this combination. It is not covered by our product promise.

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.

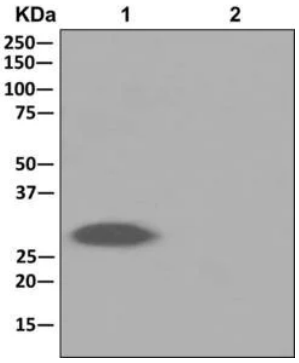
3 product images



Flow Cytometry (Intracellular) - Anti-CHMP1a antibody [EPR11939] (ab178686)

CHMP1a Flow Cytometry (Intracellular) staining using rabbit Anti-CHMP1a antibody

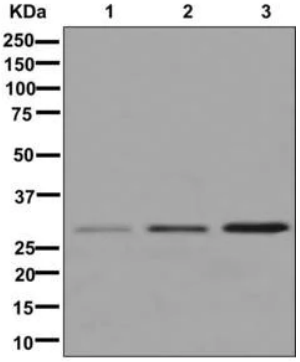
Intracellular flow cytometric analysis of permeabilized 293T cells using ab178686 at a 1/10 dilution (red) or a rabbit IgG (negative) (green).



Immunoprecipitation - Anti-CHMP1a antibody [EPR11939] (ab178686)

Western blot analysis on immunoprecipitation pellet from (Lane 1) MCF-7 cell lysate or (Lane 2) 1XPBS (negative control) using ab178686 at a 1/10 dilution for IP and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.
All lanes:
Immunoprecipitation - Anti-CHMP1a antibody [EPR11939] (ab178686)

Predicted band size: 22 kDa



Western blot - Anti-CHMP1a antibody [EPR11939] (ab178686)

All lanes:
Western blot - Anti-CHMP1a antibody [EPR11939] (ab178686) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Lane 3:
MCF-7 cell lysate at 10 µg

Predicted band size: 22 kDa

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