abcam

ab249327

Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free

Recombinant | RabMAb

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	EPR11326(B)
Purification technique	Affinity purification Protein A
Concentration	1.025 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ATP6V1D

Function	Subunit of the V1 complex of vacuolar(H+)-ATPase (V-ATPase), a multisubunit enzyme composed of a peripheral complex (V1) that hydrolyzes ATP and a membrane integral complex (V0) that translocates protons (PubMed:33065002). V-ATPase is responsible for acidifying and maintaining the pH of intracellular compartments and in some cell types, is targeted to the plasma membrane, where it is responsible for acidifying the extracellular environment (By similarity). May play a role in cilium biogenesis through regulation of the transport and the localization of proteins to the cilium (PubMed:21844891).

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

ab249327 is the carrier-free version of ab157458.

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	ATP6V1D also known as V1D is a subunit of the V1 domain of vacuolar ATPase (V-ATPase). This enzyme is essential for catalyzing ATP hydrolysis and is mitochondrial proton pump playing roles in acidifying various cell compartments. With a molecular weight of approximately 36 kDa ATP6V1D is expressed in many tissues

	with higher levels noted in the kidney liver and brain. It helps regulate the pH of intracellular compartments important for cellular processes like protein degradation and neurotransmitter uptake.
Biological function summary	ATP6V1D is an integral part of the V-ATPase complex. The V-ATPases have a critical role in the acidification of eukaryotic intracellular compartments which are important for processes such as protein sorting zymogen activation and receptor-mediated endocytosis. This complex operates in various cell types and facilitates the transport of protons across membranes maintaining the acidic environments required for enzyme activity and molecular processing.
Pathways	ATP6V1D participates in key cellular functions such as the Wnt signaling pathway and endocytosis. In the Wnt pathway it contributes to regulating cellular growth and differentiation and interacts with other proteins like ATP6V1A and ATP6V1F to sustain vesicular trafficking and pH homeostasis. These interactions support the movement and function of vesicles affecting the fusion of endosomes and lysosomes essential for cellular responses to external stimuli.
Associated diseases and disorders	Abnormalities involving ATP6V1D have been linked to neurodegenerative diseases and renal tubular acidosis. Researchers have observed that malfunction of V-ATPases including the ATP6V1D subunit can alter pH regulation in neurons associated with Alzheimer's disease. Furthermore ATP6V1D interactions with proteins such as ATP6V1C1 in the context of impaired proton pumping contribute to metabolic acidosis affecting kidney function and leading to conditions like Type I renal tubular acidosis.

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

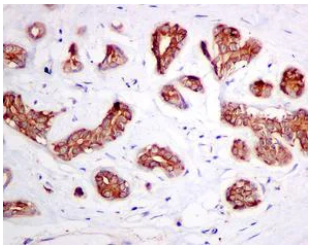
We do not recommend this combination. It is not covered by our product promise.

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

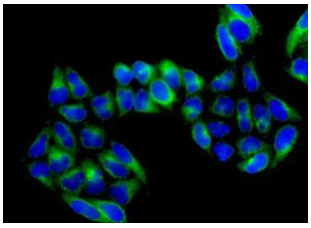


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

ATP6V1D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ATP6V1D antibody

This data was developed using ab157458, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of Paraffin-embedded Human breast tissue labeling ATP6V1D with ab157458 at 1/50 dilution.

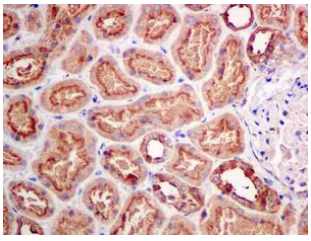
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

ATP6V1D Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ATP6V1D antibody

This data was developed using ab157458, the same antibody clone in a different buffer formulation.Immunofluorescent analysis of HeLa cells labeling ATP6V1D with ab157458 at 1/100 dilution.

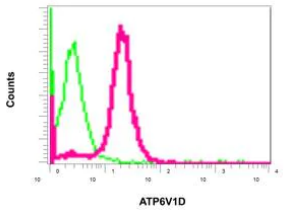


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

ATP6V1D Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ATP6V1D antibody

This data was developed using ab157458, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of Paraffin-embedded Human kidney tissue labeling ATP6V1D with ab157458 at 1/50 dilution

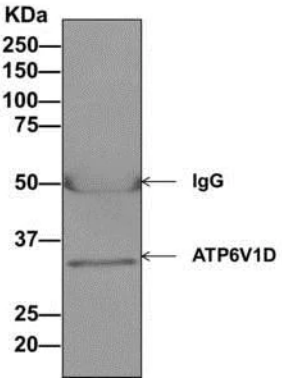
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

ATP6V1D Flow Cytometry (Intracellular) staining using rabbit Anti-ATP6V1D antibody

This data was developed using ab157458, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized 293T cells labeling ATP6V1D with ab157458 at 1/10 dilution (red) or a rabbit IgG negative (green).



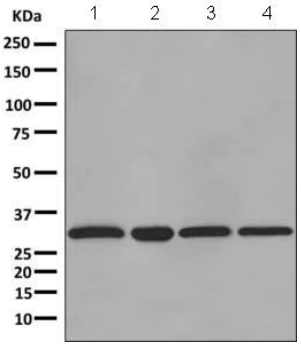
Immunoprecipitation - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

This data was developed using ab157458, the same antibody clone in a different buffer formulation.
Detection of ATP6V1D by Western Blot of Immunprecipitate. Y79 cell lysate immunoprecipitated using ab157458 at 1/10 dilution.

All lanes:
Immunoprecipitation - Anti-ATP6V1D antibody [EPR11326(B)] (ab157458) at 1/10000 dilution

All lanes:
Immunoprecipitation pellet from Y79 cell lysate at 10 µg

Predicted band size: 28 kDa



Western blot - Anti-ATP6V1D antibody [EPR11326(B)] - BSA and Azide free (ab249327)

ATP6V1D Western blot staining using rabbit Anti-ATP6V1D antibody

This data was developed using ab157458, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ATP6V1D antibody [EPR11326(B)] (ab157458) at 1/10000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Y79 cell lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 28 kDa

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