abcam

ab249548

Anti-Proteasome maturation protein antibody [EPR10177] - 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	EPR10177
Purification technique	Affinity purification
Concentration	0.972 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information POMP

Function	Molecular chaperone essential for the assembly of standard proteasomes and immunoproteasomes. Degraded after completion of proteasome maturation. Mediates the association of 20S preproteasome with the endoplasmic reticulum.

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

ab249548 is the carrier-free version of ab170865.

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	The proteasome maturation protein also known as POMP or proteassemblin plays an important role in proteasome biogenesis. It is an important factor involved in the assembly of 20S proteasomes serving as a chaperone that regulates the efficient formation of this complex. The mass of the proteasome maturation protein is approximately 21 kDa. It is expressed in various tissues including muscle liver and skin indicating its broad significance in human physiology.
Biological function summary	Proteasome maturation protein assists in the assembly and maturation of the 20S core particle which is central to the proteasome's function. This protein is a critical component of the proteasome assembly chaperone (PAC) complex which includes other chaperones that work together to construct the 20S proteasome. The activity of POMP is fundamental for maintaining cellular homeostasis by managing protein degradation.
Pathways	Proteasome maturation protein plays an important role in the ubiquitin-proteasome pathway a major protein degradation pathway. This process involves tagging defective or unneeded proteins with ubiquitin which are then degraded by

	the proteasome. The ubiquitin-proteasome pathway coordinates with other pathways such as the NF-kB signaling pathway where it regulates the degradation of inhibitors like IκB facilitating NF-kB activation. By doing so POMP through the proteasome indirectly influences various physiological processes controlled by these pathways.
Associated diseases and disorders	Alterations in the function of proteasome maturation protein have connections with conditions like cancer and autoimmune diseases. For instance abnormal proteasome activity linked to POMP can contribute to the development of multiple myeloma where proteasome inhibitors are used therapeutically to control protein degradation. Additionally autoimmunity involves irregularities in proteasome functions affecting the proteins processed by the immune system such as the MHC class I molecules. Understanding how POMP contributes to these illnesses can influence treatment strategies leveraging its central role in proteasome assembly and function.

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

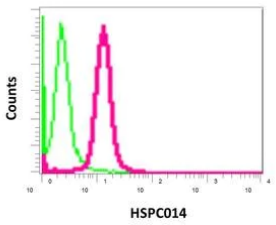
We do not recommend this combination. It is not covered by our product promise.

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.

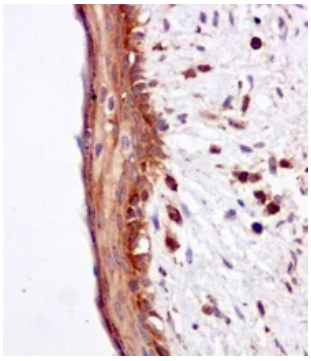
4 product images



Flow Cytometry (Intracellular) - Anti-Proteasome maturation protein antibody [EPR10177] - BSA and Azide free (ab249548)

Proteasome maturation protein Flow Cytometry (Intracellular) staining using rabbit Anti-Proteasome maturation protein antibody

This data was developed using ab170865, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling proteasome maturation protein with ab170865 at 1/100 dilution (red) or a rabbit IgG (negative) (green).

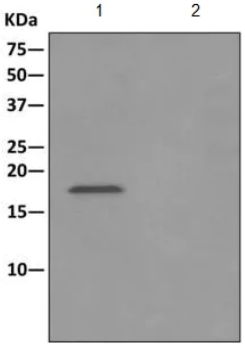


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Proteasome maturation protein antibody [EPR10177] - BSA and Azide free (ab249548)

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

This data was developed using ab170865, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of Formalin-fixed,paraffin-embedded Human skin tissue labeling proteasome maturation protein with ab170865 at 1/50 dilution.

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

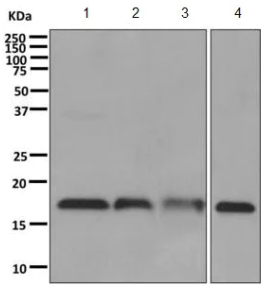


Immunoprecipitation - Anti-Proteasome maturation protein antibody [EPR10177] - BSA and Azide free (ab249548)

This data was developed using ab170865, the same antibody clone in a different buffer formulation.
Detection of proteasome maturation protein by Western Blot of Immunprecipitate.
HeLa cell lysate immunoprecipitated using ab170865 at 1/10 dilution (Lane 1) or 1X PBS (negative control) (Lane 2) and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

All lanes:
Immunoprecipitation - Anti-Proteasome maturation protein antibody [EPR10177] (ab170865)

Predicted band size: 16 kDa



Western blot - Anti-Proteasome maturation protein antibody [EPR10177] - BSA and Azide free (ab249548)

Proteasome maturation protein Western blot staining using rabbit Anti-Proteasome maturation protein antibody

This data was developed using ab170865, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Proteasome maturation protein antibody [EPR10177] (ab170865) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
SW480 cell lysate at 10 µg

Lane 3:
HL-60 cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

Predicted band size: 16 kDa

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