abcam

ab248825

Anti-Proteasome 19S S5A/ASF antibody [EPR8936] - 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	EPR8936
Purification technique	Affinity purification
Concentration	1.059 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information PSMD4

Function	Component of the 26S proteasome, a multiprotein complex involved in the ATP-dependent degradation of ubiquitinated proteins. This complex plays a key role in the maintenance of protein homeostasis by removing misfolded or damaged proteins, which could impair cellular functions, and by removing proteins whose functions are no longer required. Therefore, the proteasome participates in numerous cellular processes, including cell cycle progression, apoptosis, or DNA damage repair. PSMD4 acts as an ubiquitin receptor subunit through ubiquitin-interacting motifs and selects ubiquitin-conjugates for destruction. Displays a preferred selectivity for longer polyubiquitin chains.

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

ab248825 is the carrier-free version of ab137109.

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 19S S5A also known as ASF or AH1 is a critical component of the proteasome complex. It is a regulatory particle of the 19S proteasome responsible for recognizing and binding polyubiquitin chains during protein degradation. This protein weighs approximately 48 kDa and is predominantly expressed in the cytoplasm and nucleus of eukaryotic cells. Its primary function is to facilitate the opening of the 20S core particle allowing for substrate entry into the proteasome for subsequent degradation.
Biological function summary	The 19S S5A operates as part of a larger proteasome complex involved in maintaining protein homeostasis. It ensures efficient degradation of ubiquitinated proteins by the 26S proteasome system playing a role in cell cycle regulation signal transduction and stress responses. The S5A subunit specifically binds ubiquitin regulating the availability of substrates subject to proteolysis which is critical for the timely removal of damaged or misfolded proteins and the regulation of various intracellular processes.
Pathways	The 19S S5A participates in the ubiquitin-proteasome pathway which is critical for protein turnover and quality control in cells. It interacts with proteins such as E3 ubiquitin ligases which tag substrates with ubiquitin chains for degradation. This process is also a part of the NF-kB signaling pathway where the proteasome degrades IκB proteins leading to the activation of NF-kB and modulation of immune responses.
Associated diseases and disorders	The 19S S5A subunit has been implicated in several pathological conditions including cancer and neurodegenerative diseases. Dysregulation of the ubiquitin-proteasome system in which 19S S5A plays a role can lead to the accumulation of damaged or misfolded proteins contributing to disorders like Parkinson's and Alzheimer's disease. Abnormal activity of associated proteins such as ubiquitin ligases and other proteasome subunits often correlates with the progression of malignancies and neurodegenerative processes.

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

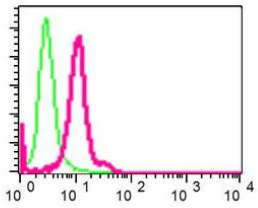
We do not recommend this combination. It is not covered by our product promise.

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.

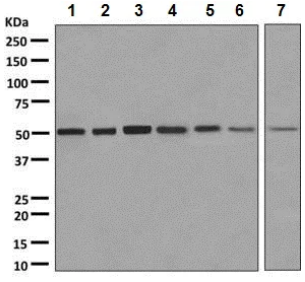
2 product images



Flow Cytometry (Intracellular) - Anti-Proteasome 19S S5A/ASF antibody [EPR8936] - BSA and Azide free (ab248825)

Proteasome 19S S5A/ASF Flow Cytometry (Intracellular) staining using rabbit Anti-Proteasome 19S S5A/ASF antibody

This data was developed using ab137109, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized K562 cells labelling Proteasome 19S S5A/ASF with ab137109 at 1/100 dilution (red). Negative Rabbit IgG control shown in green.



Western blot - Anti-Proteasome 19S S5A/ASF antibody [EPR8936] - BSA and Azide free (ab248825)

Proteasome 19S S5A/ASF Western blot staining using rabbit Anti-Proteasome 19S S5A/ASF antibody

This data was developed using ab137109, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Proteasome 19S S5A/ASF antibody [EPR8936] (ab137109) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
K562 cell lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

Lane 4:
C6 cell lysate at 10 µg

Lane 5:
Raw264.7 cell lysate at 10 µg

Lane 6:
PC-12 cell lysate at 10 µg

Lane 7:
NIH/3T3 cell lysate at 10 µg

Secondary

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

Predicted band size: 40 kDa

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