abcam

ab22639

Anti-PSMC6 antibody [p42-23]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Preservative: 0.065% Sodium azide
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human PSMC6. Database link P62333
Clone number	p42-23
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Partially purified immunoglobulin preparation.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information PSMC6

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. PSMC6 belongs to the heterohexameric ring of AAA (ATPases associated with diverse cellular activities) proteins that unfolds ubiquitinated target proteins that are concurrently translocated into a proteolytic chamber and degraded into peptides.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The PSMC6 protein also known as 26S protease regulatory subunit 8 plays a mechanical role in protein degradation. It functions as a part of the 26S proteasome complex which is involved in the ATP-dependent degradation of ubiquitinated proteins. This protein has a mass of approximately 45 kDa and is widely expressed across various tissues indicating its essential role in cellular processes. PSMC6 contains an ATPase domain which is important for its function within the proteasome.
Biological function summary	PSMC6 assists in the regulation of protein turnover which maintains the balance of protein synthesis and degradation. It is a component of the 26S proteasome which itself forms part of the larger ubiquitin-proteasome system. This system plays a role in removing damaged or unnecessary proteins from the cell maintaining protein homeostasis. The presence of the PSMC6 subunit within the proteasome complex suggests its importance in controlling cellular protein levels and influencing various cellular functions.
Pathways	PSMC6 is implicated in the ubiquitin-proteasome pathway a critical mechanism for protein degradation and cellular regulation. This pathway is central to many cellular processes including cell cycle regulation and signal transduction. PSMC6 interacts with other components of the proteasome like PSMC2 to facilitate the breakdown of ubiquitinated proteins. It is also involved in the Wnt signaling pathway which influences cell proliferation and differentiation.
Associated diseases and disorders	Dysfunction in PSMC6 has been linked to cancer and neurodegenerative diseases. Its role in the proteasome system suggests that aberrations in protein degradation could lead to the accumulation of damaged proteins associated with these conditions. In cancer for instance altered PSMC6 function may disrupt normal cell cycle regulation. The protein also interacts with other proteasome components like PSMD14 which could further contribute to disease mechanisms when dysregulated.

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

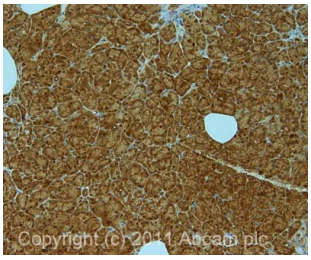
We do not recommend this combination. It is not covered by our product promise.

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

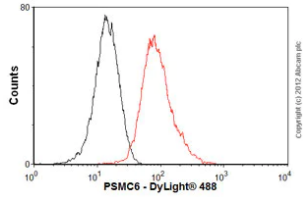


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PSMC6 antibody [p42-23] (ab22639)

PSMC6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-PSMC6 antibody

IHC image of ab22639 staining in human normal pancrease formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab22639, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

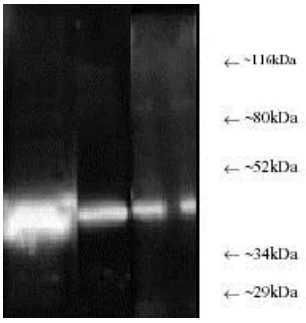
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Flow Cytometry - Anti-PSMC6 antibody [p42-23] (ab22639)

PSMC6 Flow Cytometry staining using mouse Anti-PSMC6 antibody

Overlay histogram showing HeLa cells stained with ab22639 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab22639, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Western blot - Anti-PSMC6 antibody [p42-23] (ab22639)

All lanes:
Western blot - Anti-PSMC6 antibody [p42-23] (ab22639) at 1/5000 dilution

Lane 1:
Rpt4 in HeLa S3 cytosolic preparation

Lane 2:
Purified protein

Lane 3:
Proteasome in human placenta

Developed using the ECL technique.

Predicted band size: 44 kDa

Observed band size: 44 kDa

Exposure time: 1min

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