abcam

ab26078

Anti-Proteasome 26S S2/PSMD2 antibody

Key facts

Isotype	IgG
Host species	Goat
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 0.5% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human PSMD2 aa 850 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q13200
Purification technique	Affinity purification Immunogen
Specificity	ab26078 recognises Proteasome 26S, subunit S2 .
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	0.3-1 µg/mL
Notes	1 hour primary incubation is recommended for this product.

Species	Rat

Dilution info	0.3-1 µg/mL
Notes	1 hour primary incubation is recommended for this product.

Species	Human
Dilution info	0.3-1 µg/mL
Notes	1 hour primary incubation is recommended for this product.

Predicted

Species	Pig, Macaque monkey
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Expected

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

Predicted

Species	Pig, Macaque monkey
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Pig, Macaque monkey
Dilution info	-
Notes	-

Target data

See full target information PSMD2

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. Binds to the intracellular domain of tumor necrosis factor type 1 receptor. The binding domain of TRAP1 and TRAP2 resides outside the death domain of TNFR1.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	Proteasome 26S S2 also known as PSMD2 is a subunit of the 26S proteasome. It plays an important role in the degradation of ubiquitinated proteins a process essential for maintaining protein homeostasis. The molecular mass of Proteasome 26S S2 is around 102 kDa. It is expressed in various tissues including the brain heart and muscle. The protein facilitates the recognition and unfolding of substrates destined for proteolysis by the 26S proteasome an activity that is instrumental in controlling the quality and abundance of proteins within the cell.
Biological function summary	Proteasome 26S S2 is an integral part of the 26S proteasome complex a large protease complex with a 20S core particle and 19S regulatory particles. This complex is responsible for degrading most intracellular proteins and is vital for regulating numerous cellular processes such as cell cycle control DNA repair and signal transduction. PSMD2 is linked with the assembly and stabilization of the 19S regulatory particle influencing the efficiency of the proteasome in recognizing and processing polyubiquitinated proteins.
Pathways	Proteasome 26S S2 is involved in ubiquitin-proteasome pathway and cell cycle regulation. In the ubiquitin-proteasome pathway it works with ubiquitin ligases and deubiquitinating enzymes to ensure selective and timely protein turnover. It is also associated with important regulatory proteins like CDC48 VCP/P97 which are involved in the ATP-dependent unfolding of proteins before proteasomal degradation. These pathways are essential for maintaining cellular protein homeostasis and managing cell cycle transitions suggesting an important regulatory role played by Proteasome 26S S2.
Associated diseases and disorders	Proteasome 26S S2 is linked to neurodegenerative diseases and cancers. In neurodegenerative diseases such as Parkinson's disease dysfunction of the proteasome can lead to the accumulation of misfolded proteins thereby exacerbating disease progression. In cancers overexpression of Proteasome 26S S2 and other proteasomal subunits could promote the degradation of tumor suppressor proteins fueling carcinogenesis. It connects with proteins like PINK1 and PARKIN in neurodegeneration and interacts with p53 in cancer pathways indicating its critical involvement in disease mechanisms.

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.

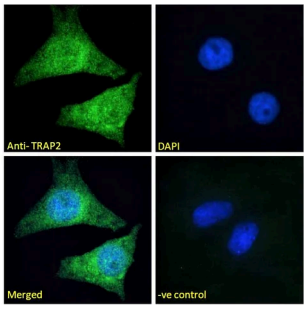
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

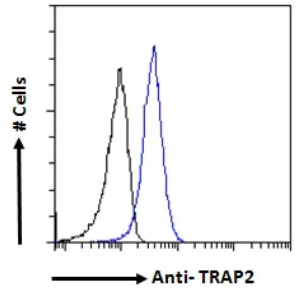
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-Proteasome 26S S2/PSMD2 antibody (ab26078)

Proteasome 26S S2/PSMD2 Immunocytochemistry/ Immunofluorescence staining using goat Anti-Proteasome 26S S2/PSMD2 antibody

Immunocytochemistry/ Immunofluorescence analysis of HeLa cell labeling proteasome 26S S2/PSMD2 with ab26078 at 10 µg/mL followed by Alexa Fluor 488 secondary antibody (2µg/mL). Cells were fixed with paraformaldehyde and permeabilized with 0.15% Triton. The nuclei were stained with DAPI (blue). Negative control: Unimmunized goat IgG (10µg/mL) followed by Alexa Fluor 488 secondary antibody (2µg/mL).
Cytoplasmic and some nuclear staining is observed.



Flow Cytometry (Intracellular) - Anti-Proteasome 26S S2/PSMD2 antibody (ab26078)

Proteasome 26S S2/PSMD2 Flow Cytometry (Intracellular) staining using goat Anti-Proteasome 26S S2/PSMD2 antibody

Flow cytometry analysis of HeLa cell labeling proteasome 26S S2/PSMD2 with ab26078 at 10 µg/mL (blue) followed by Alexa Fluor 488 secondary antibody (1µg/mL) (blue). Cells were fixed with paraformaldehyde and permeabilized with 0.5% Triton.
IgG control: Unimmunized goat IgG (black) followed by Alexa Fluor 488 secondary antibody.

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