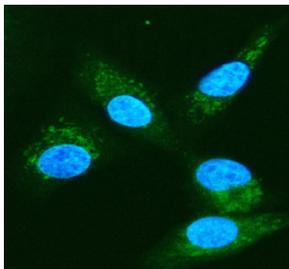


## PSMA6 Antibody / Proteasome subunit alpha type 6 (FY12545)

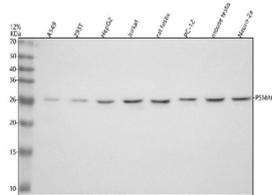
Catalog No.	Formulation	Size
FY12545	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

[Bulk quote request](#)

<b>Availability</b>	1-2 days
<b>Species Reactivity</b>	Human, Mouse, Rat
<b>Format</b>	Lyophilized
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal (rabbit origin)
<b>Isotype</b>	Rabbit IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
<b>UniProt</b>	P60900
<b>Localization</b>	Cytoplasmic, Nuclear
<b>Applications</b>	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml
<b>Limitations</b>	This PSMA6 antibody is available for research use only.



Immunofluorescent staining of PSMA6 using anti-PSMA6 antibody (green). PSMA6 was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-PSMA6 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of PSMA6 using anti-PSMA6 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse testis tissue lysates, Lane 8: mouse Neuro-2a whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PSMA6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for PSMA6 at approximately 27 kDa. The expected molecular weight of PSMA6 is ~27 kDa.

## Description

PSMA6 antibody detects Proteasome subunit alpha type-6, a core component of the 20S proteasome complex responsible for ATP-dependent protein degradation. PSMA6 contributes to the structural organization of the proteasome's alpha ring, which controls access to the catalytic chamber that degrades misfolded, oxidized, or regulatory proteins. The PSMA6 antibody is used in studies of proteostasis, ubiquitin signaling, and stress response pathways.

PSMA6 is encoded by the PSMA6 gene located on human chromosome 14q13.2. The protein is approximately 27 kilodaltons and forms one of seven alpha subunits that compose the outer rings of the cylindrical 20S core particle. Together with beta subunits, these structures assemble into the functional 26S proteasome when associated with regulatory particles such as PA700 or PA28. PSMA6 is critical for maintaining proteolytic efficiency and specificity by regulating substrate entry and gate opening.

The PSMA6 antibody detects a 27 kilodalton protein by western blot and reveals strong cytoplasmic and nuclear staining, consistent with proteasome distribution. PSMA6 contributes to the degradation of short-lived proteins involved in cell cycle progression, apoptosis, and signal transduction. Through the ubiquitin-proteasome system (UPS), PSMA6 supports protein quality control and adaptive responses to oxidative or metabolic stress.

Mutations or altered expression of PSMA6 have been linked to cardiovascular and autoimmune diseases, as well as cancer. Overexpression in tumors enhances proteasomal activity and supports rapid cell proliferation, while reduced expression leads to accumulation of damaged proteins and cellular dysfunction. In immune cells, PSMA6 influences antigen processing and presentation, shaping adaptive immune responses.

Because of its fundamental role in protein degradation, PSMA6 serves as a biomarker for proteasome activity and a potential target for therapeutic intervention in cancer and neurodegenerative diseases. NSJ Bioreagents provides a validated PSMA6 antibody optimized for western blot, immunocytochemistry, and proteasome complex studies, supporting detailed analysis of cellular protein turnover and homeostasis regulation.

## Application Notes

Optimal dilution of the PSMA6 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human PSMA6 recombinant protein (Position: M1-D246) was used as the immunogen for the PSMA6 antibody.

## Storage

After reconstitution, the PSMA6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.