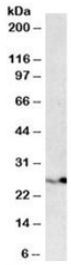
PSMB4 Goat Polyclonal Antibody / Proteasome Beta 7 Antibody (R34898)

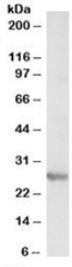
Catalog No.	Formulation	Size
R34898-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Predicted Reactivity	Dog, Cow, Rabbit
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	5692
Applications	Western blot: 0.1-0.3ug/ml ELISA (peptide) LOD: 1:8000
Limitations	This PSMB4 Goat Polyclonal Antibody / Proteasome Beta 7 Antibody is available for research use only.



PSMB4 Goat Polyclonal Antibody by WB in Human HEK293 Cell Lysate. Western blot analysis of human HEK293 whole-cell lysate using goat polyclonal PSMB4 antibody at 0.1 ug/ml. A single prominent band is detected at approximately 26-29 kDa, consistent with the predicted molecular weight of 29 kDa for Proteasome Beta 7. The result demonstrates detection of the PSMB4 protein in human cells.



PSMB4 Goat Polyclonal Antibody by WB in Mouse Liver Tissue Lysate. Western blot analysis of mouse liver tissue lysate using goat polyclonal PSMB4 antibody at 0.3 ug/ml. A single predominant band is observed at approximately 26-29 kDa, consistent with the expected molecular weight of 29 kDa for Proteasome Beta 7. The result demonstrates detection of PSMB4 in mouse tissue.

Description

PSMB4 Goat Polyclonal Antibody recognizes proteasome subunit beta type 4 (PSMB4), a component of the 20S proteasome core particle responsible for intracellular protein degradation. Also known as Proteasome Beta 7, HN3, HsN3, and PROS26, this protein belongs to the proteasome beta subunit family. PSMB4 contributes to the structural organization of the proteasome, a large molecular complex essential for maintaining protein homeostasis and regulating numerous cellular processes.

The 20S proteasome consists of four stacked heptameric rings arranged in an alpha-beta-beta-alpha configuration. Each outer ring contains seven distinct alpha subunits, while the two inner rings contain seven different beta subunits. Proteasome Beta 7 is incorporated into the inner beta rings, where it contributes to the assembly and stability of the proteolytic core. Unlike the catalytic beta subunits PSMB5, PSMB6, and PSMB7, PSMB4 primarily performs a structural function within the complex.

Proteasome assembly requires the coordinated incorporation of individual subunits into precursor complexes. PSMB4 participates in beta-ring formation and contributes to the organization of the mature 20S particle. Proper proteasome assembly is essential for efficient protein turnover, cellular stress responses, and the removal of proteins that are damaged, misfolded, or no longer required.

The 20S core associates with regulatory complexes, including the 19S particle, to form the 26S proteasome. This assembly recognizes ubiquitin-tagged proteins, removes ubiquitin chains, unfolds substrates, and directs them into the central proteolytic chamber. The ubiquitin-proteasome system regulates cell cycle progression, transcription factor stability, DNA damage responses, and intracellular signaling. Through its contribution to proteasome structure, PSMB4 supports these fundamental processes.

Disruption of proteasome assembly or function can lead to abnormal protein accumulation and impaired cellular homeostasis. Altered proteasome activity is associated with cancer, neurodegenerative disorders, and inflammatory conditions. Proteasome Beta 7 is therefore relevant to investigations of proteasome biogenesis, protein quality control, and the relationship between proteasomal degradation and cellular stress.

A PSMB4 Goat Polyclonal Antibody from NSJ Bioreagents supports research investigating Proteasome Beta 7 expression, 20S proteasome organization, ubiquitin-dependent protein degradation, and mechanisms maintaining cellular proteostasis.

For a rabbit polyclonal alternative with additional Western blot, immunohistochemistry, immunofluorescence, and flow cytometry validation, see our PSMB4 Antibody (RQ7242).

Application Notes

Optimal dilution of the PSMB4 Goat Polyclonal Antibody / Proteasome Beta 7 Antibody should be determined by the researcher.

Immunogen

Amino acids NRFQIATVTE were used as the immunogen for this PSMB4 Goat Polyclonal Antibody.

Storage

Aliquot and store the PSMB4 Goat Polyclonal Antibody at -20oC.

Alternate Names

Proteasome Beta 7 antibody, Proteasome Subunit Beta 4 antibody, Proteasome Subunit Beta Type 4 antibody, 20S Proteasome Beta 7 antibody, Proteasome Beta Chain antibody, Macropain Beta Chain antibody, HN3 antibody, HsN3 antibody, PROS26 antibody

Copyright © NSJ Bioreagents. All rights reserved.