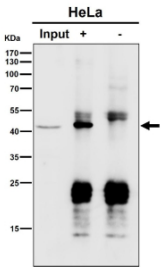
PSMC5 Antibody / 26S proteasome regulatory subunit 8 [clone 29P84] (FY13021)

Catalog No.	Formulation	Size
FY13021	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

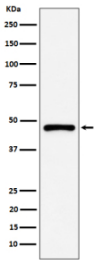
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29P84
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P62195
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200 Immunoprecipitation : 1:50 Flow Cytometry : 1:50
Limitations	This PSMC5 antibody is available for research use only.



Immunoprecipitation analysis using the antibody at 1:50 dilution. Western blot at 1:1000 dilution. Predicted molecular weight ~46 kDa.



Western blot analysis of PSMC5 expression in human A431 cell lysate. Predicted molecular weight ~46 kDa.

Description

PSMC5 antibody detects 26S proteasome regulatory subunit 8, encoded by the PSMC5 gene. This protein is one of the six ATPases of the AAA family that form the base of the 19S regulatory particle of the proteasome. PSMC5, also known as TBP1, provides ATP hydrolysis required for unfolding and translocating ubiquitinated substrates into the 20S core particle for degradation. PSMC5 antibody provides researchers with a reliable tool to study protein homeostasis, cell cycle regulation, and signaling pathways dependent on proteasomal degradation.

The 26S proteasome is responsible for the majority of regulated intracellular protein degradation in eukaryotic cells. By removing misfolded proteins, damaged proteins, and short lived regulatory proteins, the proteasome maintains proteostasis and controls key signaling events. Research using PSMC5 antibody has shown that 26S proteasome regulatory subunit 8 contributes to ATP driven unfolding, ensuring substrate entry into the proteolytic chamber. This function is essential for turnover of cell cycle regulators, transcription factors, and signal transduction intermediates.

Dysfunction of the proteasome contributes to numerous diseases, including neurodegenerative disorders such as Parkinson and Alzheimer disease, where accumulation of protein aggregates is a hallmark. Research with PSMC5 antibody has demonstrated that altered proteasome activity leads to impaired clearance of aggregation prone proteins. In cancer, hyperactivation of the proteasome allows degradation of tumor suppressors and cell cycle inhibitors, promoting unchecked proliferation. PSMC5 has also been implicated in immune regulation, where proteasomal processing generates antigenic peptides presented on MHC class I molecules.

PSMC5 antibody is widely used in western blotting, immunoprecipitation, and immunohistochemistry. Western blotting demonstrates abundance in metabolically active tissues, while immunoprecipitation allows isolation of 19S regulatory complexes containing PSMC5. Immunohistochemistry highlights proteasome distribution in brain, muscle, and immune organs. These applications make PSMC5 antibody versatile in both fundamental and translational research.

By supplying validated PSMC5 antibody reagents, NSJ Bioreagents supports research into proteasome biology, neurodegeneration, and oncology. Detection of 26S proteasome regulatory subunit 8 ensures that researchers can examine how protein degradation maintains cellular health and contributes to disease when dysregulated.

Application Notes

Optimal dilution of the PSMC5 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human PSMC5 was used as the immunogen for the PSMC5 antibody.

Storage

Store the PSMC5 antibody at -20oC.