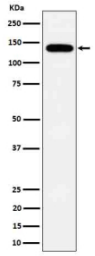
TPP2 Antibody / Tripeptidyl peptidase II [clone 31T71] (FY12292)

Catalog No.	Formulation	Size
FY12292	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
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31T71
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	P29144
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200 Immunocytochemistry/Immunofluorescence: 1:50-1:200 Flow Cytometry: 1:50
Limitations	This TPP2 antibody is available for research use only.



Western blot analysis of Tripeptidyl peptidase II expression in HepG2 cell lysate using TPP2 antibody. Predicted molecular weight ~138 kDa.

Description

TPP2 antibody is designed to detect tripeptidyl peptidase II (TPP2), a large serine protease that plays an important role in intracellular protein turnover. TPP2 is a cytosolic peptidase that removes tripeptides from the N-termini of longer oligopeptides generated by the proteasome. This activity complements the ubiquitin-proteasome system by further degrading peptides into smaller fragments, which can then be recycled or used for antigen processing. Due to its size and function, TPP2 is sometimes described as a 'giant peptidase' that acts downstream of the proteasome in maintaining protein homeostasis.

TPP2 antibody has broad utility in cell biology, immunology, and cancer research. Its detection capabilities allow scientists to evaluate TPP2 expression and localization in different cell types and tissues. In cancer biology, TPP2 overexpression has been linked to resistance against apoptosis, particularly in tumor cells that evade proteasome inhibition. Because proteasome inhibitors are widely used in cancer therapy, studying TPP2 expression with specific antibodies provides insight into potential mechanisms of drug resistance. Additionally, TPP2 activity is involved in regulating cell proliferation and survival, making it an important target in oncology research.

In immunology, TPP2 plays a role in shaping the antigenic peptide repertoire presented by major histocompatibility complex (MHC) class I molecules. By trimming peptides generated by the proteasome, TPP2 influences immune recognition and T cell responses. Dysregulation of this process can impact immune surveillance, infection outcomes, and autoimmune conditions. TPP2 antibody enables researchers to track these processes by providing reliable detection of protein expression in immune cells and tissues.

The antibody is applicable in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry. In western blot experiments, TPP2 antibody specifically recognizes the protein's large molecular weight band, confirming its expression in experimental systems. In immunohistochemistry and immunofluorescence, it reveals cytoplasmic localization, allowing researchers to examine distribution patterns under normal and stress conditions. These tools expand the capacity to study proteostasis in detail, especially in the context of disease.

Beyond cancer and immunology, TPP2 has been implicated in metabolic regulation and aging. Studies suggest that altered TPP2 activity influences cell survival pathways, oxidative stress responses, and longevity. By employing TPP2 antibody, scientists can investigate how changes in protease activity contribute to organismal health and disease progression. Its role in both basic and translational research makes it a valuable reagent for diverse fields of study.

TPP2 antibody provided by NSJ Bioreagents is a reliable resource for investigating the biology of tripeptidyl peptidase II. With proven applications in multiple research techniques, it allows scientists to explore the intersection of proteolysis, immune regulation, and cancer biology. This antibody supports ongoing efforts to better understand protein turnover and its significance in maintaining cellular homeostasis.

Application Notes

Optimal dilution of the TPP2 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Tripeptidyl peptidase II was used as the immunogen for the TPP2 antibody.

Storage

Store the TPP2 antibody at -20oC.

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