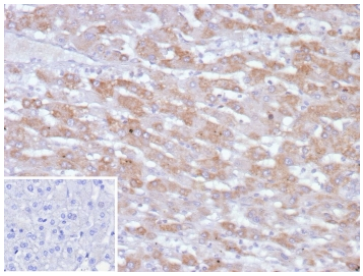
PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody [clone PHPT1/12053] (V5721)

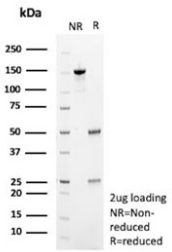
Catalog No.	Formulation	Size
V5721-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5721-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5721SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	PHPT1/12053
Purity	Protein A/G affinity
UniProt	Q9NRX4
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody is available for research use only.



PHPT1 Antibody in Human Hepatocellular Carcinoma IHC. Immunohistochemistry staining of FFPE human hepatocellular carcinoma tissue with PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody clone PHPT1/12053. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris containing 1 mM EDTA, pH 9, for 20 min followed by cooling prior to testing. The inset shows the secondary antibody negative control, with PBS substituted for the primary antibody. This PHPT1 Antibody demonstrates detection of PHPT1 in human hepatocellular carcinoma tissue.



Purified PHPT1 Antibody SDS-PAGE. Electrophoretic analysis of purified, BSA-free PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody clone PHPT1/12053 was performed as confirmation of antibody integrity and purity. The purified antibody preparation demonstrates the expected immunoglobulin protein profile under the tested electrophoretic conditions.

Description

PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody recognizes phosphohistidine phosphatase 1 (PHPT1), a small cytoplasmic enzyme involved in the regulation of reversible protein histidine phosphorylation. PHPT1 is a highly conserved protein of approximately 125 amino acids and is also known as protein histidine phosphatase (PHP). Histidine phosphorylation is a less extensively characterized form of reversible protein phosphorylation than modification of serine, threonine and tyrosine, and PHPT1 was the first eukaryotic protein histidine phosphatase to be identified.

PHPT1 catalyzes the removal of phosphate from phosphohistidine-containing substrates and helps regulate cellular phosphohistidine levels. An established substrate is ATP-citrate lyase (ACLY), a metabolic enzyme in which histidine phosphorylation participates in catalytic activity. PHPT1 has also been associated with signaling involving heterotrimeric G proteins and regulation of the KCa3.1 potassium channel, linking this phosphatase to metabolic regulation, ion-channel activity and intracellular signal transduction.

PHPT1 is expressed in multiple human tissues, with particularly prominent expression reported in skeletal muscle and heart. Research into PHPT1 and other regulators of phosphohistidine signaling continues to expand as the biological significance of this noncanonical post-translational modification becomes better understood. A PHPT1 Antibody can therefore be useful for investigating PHPT1 expression and distribution in studies of protein phosphorylation, metabolism and cellular signaling.

This mouse monoclonal antibody was generated using recombinant human 14 kDa phosphohistidine phosphatase protein and is validated for immunohistochemical detection in human FFPE tissue. NSJ Bioreagents provides this PHPT1 Antibody for research into histidine phosphorylation and PHPT1 biology. A 14 kDa Phosphohistidine Phosphatase Antibody can support studies examining this phosphatase and its role in reversible histidine phosphorylation.

For additional reagents targeting this enzyme, visit our Phosphohistidine Phosphatase 1 Antibody / Histidine Phosphatase Antibody page.

Application Notes

Optimal dilution of the PHPT1 Antibody / 14 kDa Phosphohistidine Phosphatase Antibody should be determined by the researcher.

Immunogen

A recombinant human 14 kDa phosphohistidine phosphatase protein was used as the immunogen for the PHPT1 antibody.

Storage

Aliquot the PHPT1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PHPT1 antibody, phosphohistidine phosphatase 1 antibody, 14 kDa phosphohistidine phosphatase antibody, protein histidine phosphatase antibody, PHP antibody

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