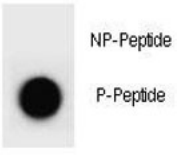
PTEN (pY176) Antibody / Phospho-PTEN Tyr176 Antibody (F48804)

Catalog No.	Formulation	Size
F48804-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48804-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Xenopus
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P60484
Applications	Dot blot: 1:500
Limitations	This PTEN (pY176) Antibody / Phospho-PTEN Tyr176 Antibody is available for research use only.



PTEN (pY176) Antibody Phosphopeptide Dot Blot. Dot blot analysis was performed with PTEN (pY176) Antibody using 50 ng per dot of phosphorylated (P-peptide) and non-phosphorylated (NP-peptide) PTEN peptides. A strong signal is detected with the phosphorylated peptide, while no detectable signal is observed with the corresponding non-phosphorylated peptide. This Phospho-PTEN Tyr176 Antibody demonstrates phosphorylation-specific recognition of PTEN at Tyr176.

Description

PTEN (pY176) Antibody / Phospho-PTEN Tyr176 Antibody recognizes PTEN when phosphorylated at tyrosine 176. PTEN, or phosphatase and tensin homolog, is a tumor suppressor with a central role in negatively regulating phosphoinositide 3-kinase (PI3K)/AKT signaling. Through its lipid phosphatase activity, PTEN dephosphorylates phosphatidylinositol (3,4,5)-trisphosphate (PIP3), opposing PI3K activity and restricting downstream signals involved in

cell proliferation, survival, growth and metabolism.

PTEN function is influenced by multiple post-translational modifications, including phosphorylation at serine, threonine and tyrosine residues. These modifications can affect PTEN activity, stability, protein interactions and subcellular localization. Tyr176 is located within the C2 domain of PTEN, a region involved in membrane association and interactions that contribute to the proper positioning and regulation of the protein. A PTEN (pY176) Antibody provides a means of examining the Tyr176-phosphorylated form separately from total PTEN protein.

Tyrosine phosphorylation represents one mechanism through which PTEN may be integrated into broader cellular signaling networks. Changes in phosphorylation state can alter protein-protein interactions and influence the functional behavior of signaling proteins without necessarily changing their overall expression. Site-specific analysis of PTEN Tyr176 phosphorylation can therefore complement total PTEN measurements when investigating signaling-dependent regulation of this tumor suppressor.

PTEN is frequently disrupted in human cancer through mutation, deletion, reduced expression and altered regulatory mechanisms. Loss of effective PTEN activity can permit increased PI3K/AKT pathway signaling, supporting abnormal cellular proliferation and survival. Phosphorylation-specific studies provide an additional approach to investigating PTEN regulation in cancer models and can help distinguish changes in post-translational state from changes in total protein abundance.

Researchers investigating phosphorylation-dependent regulation of PTEN and other signaling proteins can explore our Phospho Antibody - Phosphorylation Specific Antibodies page for additional reagents designed to detect site-specific phosphorylation events involved in signal transduction, growth regulation and disease biology.

NSJ Bioreagents offers PTEN (pY176) Antibody for research into site-specific phosphorylation and PTEN signaling. A Phospho-PTEN Tyr176 Antibody can support studies of PTEN regulation, PI3K/AKT signaling, tumor suppressor biology and cellular mechanisms associated with phosphorylation-dependent signaling.

For broader research into PTEN expression and tumor suppressor function, explore our PTEN Antibody page for additional reagents targeting phosphatase and tensin homolog.

Application Notes

Titration of the PTEN (pY176) Antibody / Phospho-PTEN Tyr176 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This PTEN (pY176) Antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pY176 of human PTEN.

Storage

Aliquot the PTEN (pY176) Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PTEN (pY176) antibody, Phospho-PTEN Tyr176 antibody, PTEN phospho-Tyr176 antibody, PTEN pTyr176 antibody, PTEN Tyr176 antibody, Phosphatase and Tensin Homolog antibody

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