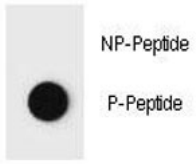
PTEN (pT382) Antibody / Phospho-PTEN Thr382 Antibody (F48739)

Catalog No.	Formulation	Size
F48739-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48739-0.08ML	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 (pT382) Antibody / Phospho-PTEN Thr382 Antibody is available for research use only.



PTEN (pT382) Antibody Phosphopeptide Dot Blot. Dot blot analysis was performed with PTEN (pT382) 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 Thr382 Antibody demonstrates phosphorylation-specific recognition of PTEN at Thr382.

Description

PTEN (pT382) Antibody / Phospho-PTEN Thr382 Antibody recognizes PTEN when phosphorylated at threonine 382. PTEN, or phosphatase and tensin homolog, is a major tumor suppressor that negatively regulates phosphoinositide 3-kinase (PI3K)/AKT signaling. PTEN dephosphorylates phosphatidylinositol (3,4,5)-trisphosphate (PIP3), opposing PI3K activity and limiting downstream signaling involved in cellular proliferation, survival, growth and metabolism.

PTEN is regulated by multiple post-translational modifications, including phosphorylation of residues within its C-terminal tail. Threonine 382 lies within a regulatory phosphorylation cluster that includes Ser380, Thr382, Thr383 and Ser385. Modification of residues within this region can influence PTEN conformation, protein stability, membrane association and phosphatase activity, providing an important mechanism for controlling PTEN function independently of changes in total protein abundance.

Phosphorylation of the PTEN C-terminal tail is associated with conformational regulation of the protein. Increased phosphorylation within this region can favor a more closed conformation that enhances PTEN stability while limiting its association with the plasma membrane and accessibility to membrane-associated substrates. Dephosphorylation can promote a more open state with increased membrane interaction and catalytic activity, although it may also affect protein stability. A PTEN (pT382) Antibody can help distinguish the Thr382-phosphorylated population of PTEN from total PTEN in studies examining these regulatory mechanisms.

Phosphorylation-dependent PTEN regulation is particularly relevant to cancer and cell signaling research. Loss of PTEN activity through mutation, deletion, reduced expression or altered regulation can increase PI3K/AKT pathway signaling and contribute to abnormal cell survival and proliferation. Analysis of Thr382 phosphorylation can complement measurements of total PTEN expression by providing information about a specific regulatory modification that may influence PTEN behavior and signaling activity.

Researchers investigating PTEN phosphorylation and related post-translational signaling mechanisms can explore our Phospho Antibody - Phosphorylation Specific Antibodies page for additional reagents targeting phosphorylation-dependent events in cell signaling, growth regulation and disease biology.

NSJ Bioreagents offers PTEN (pT382) Antibody for research into phosphorylation-dependent regulation of PTEN. A Phospho-PTEN Thr382 Antibody can support studies of PTEN regulation, PI3K/AKT signaling, tumor suppressor biology and mechanisms involving site-specific phosphorylation of the PTEN C-terminal regulatory region.

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 (pT382) Antibody / Phospho-PTEN Thr382 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This PTEN (pT382) Antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pT382 of human PTEN.

Storage

Aliquot the PTEN (pT382) Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PTEN (pT382) antibody, Phospho-PTEN Thr382 antibody, PTEN phospho-Thr382 antibody, PTEN pThr382 antibody, PTEN Thr382 antibody, Phosphatase and Tensin Homolog antibody

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