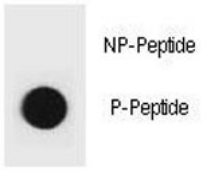
PTEN (pY315) Antibody / Phospho-PTEN Tyr315 Antibody (F48805)

Catalog No.	Formulation	Size
F48805-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F48805-0.08ML	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
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 (pY315) Antibody / Phospho-PTEN Tyr315 Antibody is available for research use only.



PTEN (pY315) Antibody Phosphopeptide Dot Blot. Dot blot analysis was performed with PTEN (pY315) 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 Tyr315 Antibody demonstrates phosphorylation-specific recognition of PTEN at Tyr315.

Description

PTEN (pY315) Antibody / Phospho-PTEN Tyr315 Antibody recognizes PTEN when phosphorylated at tyrosine 315. PTEN, or phosphatase and tensin homolog, is a major tumor suppressor and negative regulator of phosphoinositide 3-kinase (PI3K)/AKT signaling. Through its lipid phosphatase activity, PTEN converts phosphatidylinositol (3,4,5)-trisphosphate (PIP3) to phosphatidylinositol (4,5)-bisphosphate (PIP2), opposing PI3K activity and limiting

downstream signals involved in cellular proliferation, survival, growth and metabolism.

PTEN function is regulated through multiple post-translational modifications, including phosphorylation at serine, threonine and tyrosine residues. These modifications can influence protein stability, catalytic activity, subcellular localization and interactions with other cellular proteins. Tyr315 is located within the C2 domain of PTEN, a region that contributes to membrane association and the positioning of PTEN relative to its membrane-associated substrates. A PTEN (pY315) Antibody enables investigation of this site-specific phosphorylated form independently of total PTEN expression.

Tyrosine phosphorylation can provide an important mechanism for integrating PTEN into cellular signaling networks. Changes in the phosphorylation state of individual residues may influence PTEN interactions or functional properties without necessarily altering overall protein abundance. Studying Tyr315 phosphorylation can therefore complement measurements of total PTEN and provide additional information about phosphorylation-dependent regulation of this tumor suppressor.

PTEN is frequently altered in human cancers through mutation, deletion, reduced expression or disruption of mechanisms controlling its activity. Impaired PTEN function can result in increased PI3K/AKT signaling and contribute to abnormal cell proliferation and survival. Phospho-specific analysis allows researchers to examine regulatory changes in PTEN that may occur even when total PTEN remains detectable, providing another approach to studying PTEN signaling in cancer and other disease models.

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

NSJ Bioreagents offers PTEN (pY315) Antibody for research into site-specific phosphorylation and PTEN signaling. A Phospho-PTEN Tyr315 Antibody can support studies of PTEN regulation, PI3K/AKT signaling, tumor suppressor biology and cellular mechanisms involving 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 (pY315) Antibody / Phospho-PTEN Tyr315 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This PTEN (pY315) Antibody was produced from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding pY315 of human PTEN.

Storage

Aliquot the PTEN (pY315) Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PTEN (pY315) antibody, Phospho-PTEN Tyr315 antibody, PTEN phospho-Tyr315 antibody, PTEN pTyr315 antibody, PTEN Tyr315 antibody, Phosphatase and Tensin Homolog antibody

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