Phospho-PTEN (Ser380) (NA9) rabbit mAb

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Catalog: #2236 **Store at:** -20ºC

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: Unconjugated

Cross Reactivity: Predicted to work with mouse, rat, and other homologues.

Formulation: 1X PBS, 0.02% NaN3, 50% Glycerol, 0.1% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse

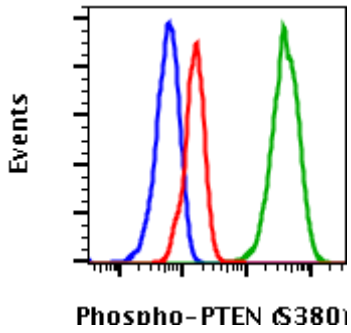
Recommended Usage: 1µg/mL – 0.001µg/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Ser380 of human phospho PTEN

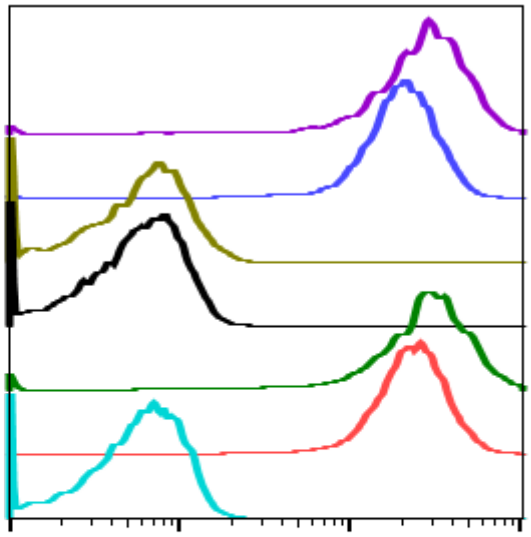
Description: PTEN has been identified as a tumor suppressor gene and has been found to be mutated in a significant number of human cancers, including prostate, brain, and breast cancer. PTEN shares sequence homology with the protein-tyrosine phosphatase (PTPase) family of proteins and negatively regulates the PI3K/Akt pathway. PTEN de-phosphorylates target proteins, and recombinant PTEN has been shown to have phosphoinositide 3-phosphhatase and inositol phosphate 3-phosphatase activity. Studies of primary tumor cells show a loss of PTEN expression after metastasis to the brain, via astrocyte-derived microRNAs. A cluster of phosphorylation sites (S380, T382, T383, and S385) in the C-terminal tail of PTEN drive a conformational change that reduces PTEN activity by inhibiting membrane interactions.

References:

Li J, Yen C, Liaw D, et al. (1997) Science. 275:1943-1947.
Maehama T, and Dixon JE. (1998) Journal of Biological Chemistry. 273:13375-13378.
Zhang L, Zhang S, You J, et al. (2015) Nature. 527:100-104.
Chen Z, Dempsey DR, Thomas SN, Hayward D, Bolduc DM, and Cole PA. (2016) Journal of Biological Chemistry. 291:14160-14169.

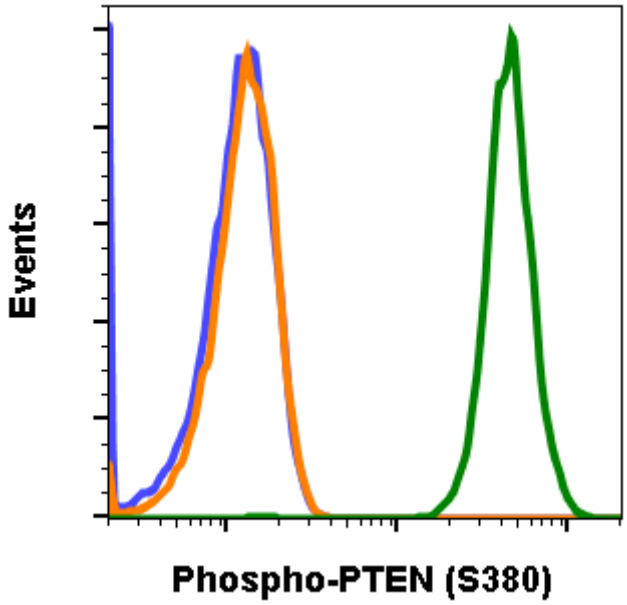


Flow cytometric analysis of A431 cells, untreated and unstained as negative control (blue) or untreated and stained (green) or treated with lambda phosphatase and stained (red) using Phospho-PTEN (S380) antibody, PTENS380-NA9 at 0.1 ug/mL, Cat. #2236.



	SampleID	Median : BL1-A
☐	EGF NA9 N	27430
☐	Ctrl NA9 N	19876
☐	EGF NA9 P	596
☐	Ctrl NA9 P	523
☐	EGF NA9	27991
☐	Ctrl NA9	22595
☐	Ctrl 2' only	553

Peptide blocking flow cytometric analysis of A431 cells secondary antibody only negative control (light blue) or untreated (red) or treated with EGF (green) or untreated and blocked with phospho-peptide (black) or EGF and blocked with phospho peptide (gold) or untreated and blocked with non-phospho peptide (dark blue) or EGF and blocked with non-phospho peptide (purple) using Phospho-PTEN (S380) antibody PTENS380-NA9 0.05 µg/mL. Cat. #2236.



PTENS380-NA9 recognizes basal phosphorylation levels in mouse cells. Flow cytometric analysis of L929 cells secondary antibody only (blue) or 0.1 µg/mL of isotype control Cat. #2141 (orange) or of Phospho-PTEN (S380) antibody PTENS380-NA9 (green) Cat. #2236.