Phospho-PTEN (Ser380/Thr382/383) (E4) rabbit mAb

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

Applications	Detection	Clonality	Isotype
Flow Cytometry,WB	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

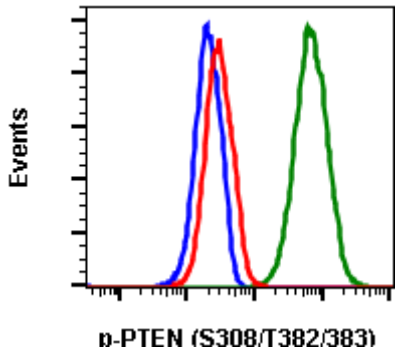
Recommended Usage: 1µg/mL – 0.001µg/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Ser380 and Thr382/383 of human phospho PTEN

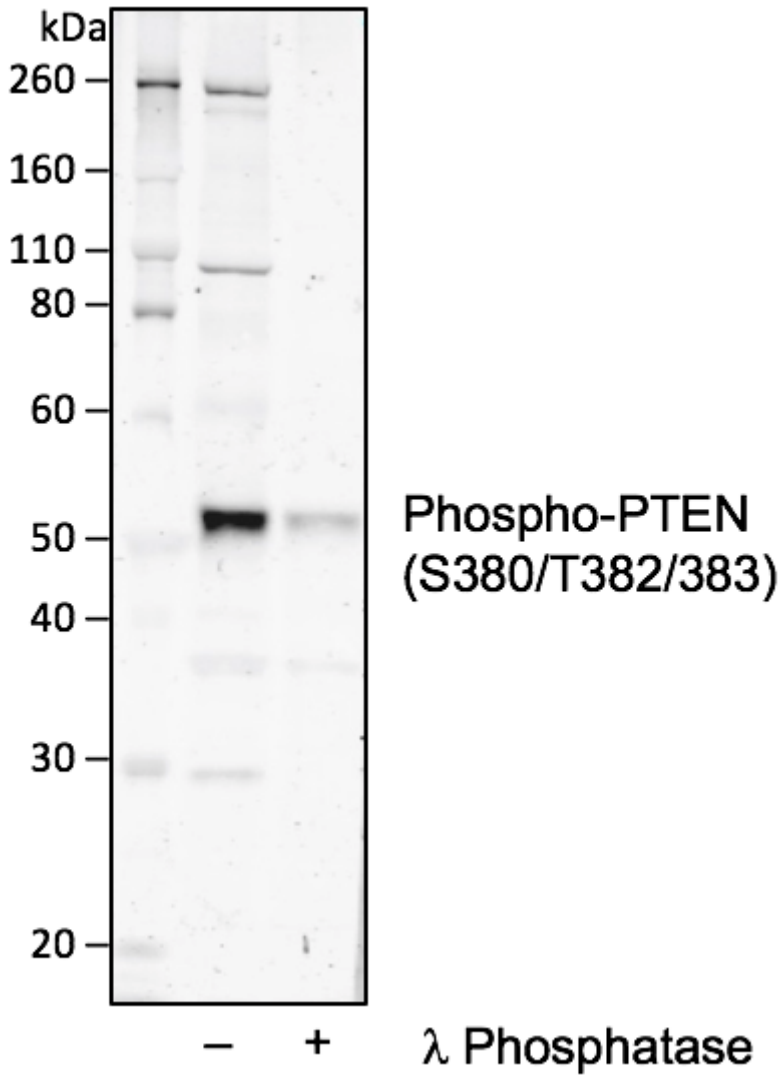
Description: PTEN has been identified as a tumor suppressor gene and has been found to be mutated in a significant number of human cancers, including prostate, brain, and breast cancer. PTEN shares sequence homology with the protein-tyrosine phosphatase (PTPase) family of proteins and negatively regulates 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:

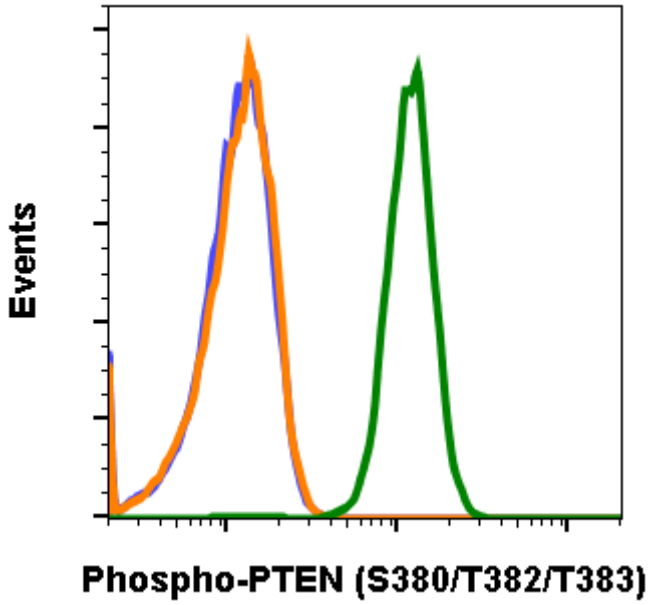
Li J, Yen C, Liaw D, et al. (1997) Science. 275:1943-1947.
Maehama T, and Dixon JE. (1998) Journal of Biological Chemistry. 273:13375-13378.
Zhang L, Zhang S, You J, et al. (2015) Nature. 527:100-104.
Chen Z, Dempsey DR, Thomas SN, Hayward D, Bolduc DM, and Cole PA. (2016) Journal of Biological Chemistry. 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-E4 at 0.1 ug/mL, Cat. #2231.



Western blot analysis of HEK293 cell extract untreated or treated with lambda phosphatase using Phospho-PTEN (Ser380/Thr382/383) antibody PTENS380T382383-E4. Cat. #2131. Concentration 0.01 µg/mL.



PTENS380T382383-E4 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 (Ser380/Thr382/383) antibody PTENS380T382383-E4 (green). Cat. #2131.