

# Phospho-PTEN (Ser380/Thr382/383) (E4) rabbit mAb SureLight488 conjugate

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## #2135

Store at: 2-8°C

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

Applications	Detection	Clonality	Isotype
Flow Cytometry	N/A	Monoclonal	Rabbit IgGk

**Format:** SureLight 488

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

**Formulation:** 1X PBS, 0.09% NaN<sub>3</sub>, 0.2% BSA

**Preparation:** Protein A+G

**Reactivity:** Human, Mouse

### Recommended

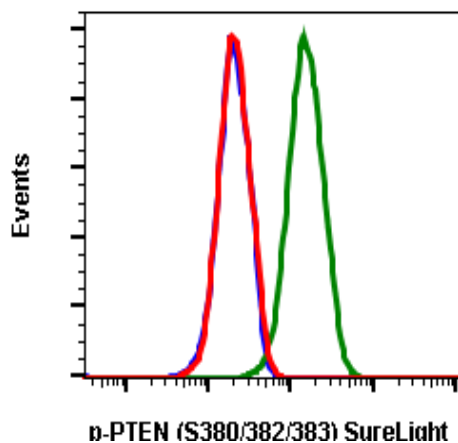
**Usage:** For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. It is recommended that the reagent be titrated for optimal performance for each application.

**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-phosphatase 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, unstained and untreated as negative control (blue) or stained and untreated (green) or stained and treated with lambda phosphatase (red) using Phospho-PTEN (Ser380/Thr382/383) antibody PTENS380T382383-E4 SureLight488 conjugate Cat. #2135.