Recombinant Human PTEN Protein, His-tagged

Cat. No. PTEN-31H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PTEN protein with a N-terminal His-tag was expressed in Sf21 cells.
Species	Human
Source	Insect Cells
Description	This gene was identified as a tumor suppressor that is mutated in a large number of c ancers at high frequency. The protein encoded by this gene is a phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase. It contains a tensin like domain as well as a catal ytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylate s phosphoinositide substrates. It negatively regulates intracellular levels of phosphatid ylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negative ly regulating AKT/PKB signaling pathway. The use of a non-canonical (CUG) upstrea m initiation site produces a longer isoform that initiates translation with a leucine, and is thought to be preferentially associated with the mitochondrial inner membrane. This longer isoform may help regulate energy metabolism in the mitochondria. A pseudoge ne of this gene is found on chromosome 9. Alternative splicing and the use of multiple translation start codons results in multiple transcript variants encoding different isofor ms.
Molecular Mass	50.8 kDa
Purity	≥95% estimated by SDS-PAGE

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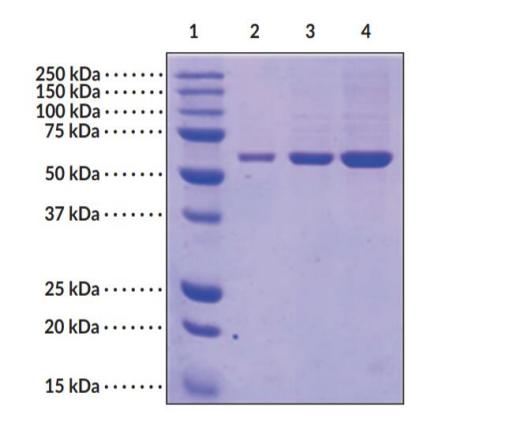
Stability	≥ 6 months
Storage	Store it at -80 centigrade
Storage Buffer	50 mM Tris-HCl, pH 8.0, 100 mM sodium chloride, 5 mM DTT, and 20% glycerol

GENE INFORMATION

Gene Name	PTEN phosphatase and tensin homolog [Homo sapiens (human)]
Official Symbol	PTEN
Synonyms	PTEN; phosphatase and tensin homolog; BZS; DEC; CWS1; GLM2; MHAM; TEP1; MMAC1; PTEN1; 10q23del; PTENbeta; phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; MMAC1 phosphatase and tensin homolog deleted on chromosome 10; PTENepsilon; mitochondrial PTENalpha; mitochondrial phosphatase and tensin protein alpha; mutated in multiple advanced cancers 1; phosphatase and tensin-like protein; phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; protein tyrosine phosphatase
Gene ID	5728
mRNA Refseq	NM_000314
Protein Refseq	NP_000305
MIM	601728
UniProt ID	P60484

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SDS-PAGE Analysis of PTEN



Lane 1: MW Markers; Lane 2: PTEN (2 µg); Lane 3: PTEN (5 µg); Lane 4: PTEN (10 µg). Representative gel image shown; actual purity may vary between each batch.

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