

Recombinant Human PTEN Protein, His-tagged

Cat. No. PTEN-078H Lot. No. (See product label)

SPECIFICATION

Product Overview Human recombinant N-terminal His-tagged PPP2CA protein purified from Sf21 cells.

Species Human

Source Insect Cells

Description

This gene was identified as a tumor suppressor that is mutated in a large number of cancers 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 catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. It negatively regulates intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells and functions as a tumor suppressor by negatively regulating AKT/PKB signaling pathway. The use of a non-canonical (CUG) upstream 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 pseudogene 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 isoforms.

Molecular Mass 50.8 kDa

Purity ≥95% as determined by SDS-PAGE

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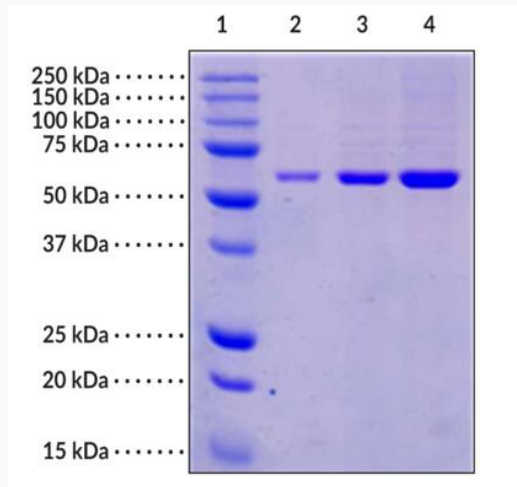
Stability	≥ 6 months
Storage	At -80 centigrade.
Storage Buffer	50 mM Tris-HCl, pH 8.0, 100 mM sodium chloride, 5 mM DTT, and 20% glycerol
GENE INFORMATION	
Gene Name	PTEN phosphatase and tensin homolog [Homo sapiens (human)]
Official Symbol	PTEN
Synonyms	PTEN; phosphatase and tensin homolog; BZS; DEC; 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; EC 3.1.3.16; EC 3.1.3.48; EC 3.1.3.67
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 μ g)
Lane 3: PTEN (5 μ g)
Lane 4: PTEN (10 μ g)

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