

Recombinant Full Length Human PTEN Protein, C-Flag-tagged

Cat. No. PTEN-114HFL Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human PTEN Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian 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.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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Molecular Mass	47 kDa
AA Sequence	MTAIIKEIVSRNKRRYQEDGFDLDLTYIYPNIIAMGFPAERLEGVYRNNIDDVVRFLDS KHKNHYKIYNL CAERHYDTAKFNCRVAQYPFEDHNPPQLELIKPFCELDLQWLSED DNHVAIIHCKAGKGRTGVMICAYLL HRGKFLKAQEALDFYGEVRTRDKKGV TIPSQ RRYVYYYYSYLLKNHLDYRPVALLFHKMMFETIPMFSGGT CNPQFVVCQLKVKIYSS NSGPTRREDKFM YFEFPQPLPVC GDIKVEFFHKQNKMLKKDKMFHFWVNTFFI PGP EETSEKVENGLCDQEIDSICSIERADNDKEYLVLTLTKNLDLKDANKDKANRYFSPNF KVKLYFTKT VEEPSNPEASSSTSVTPDVSDNEPDHYRYSDDTSDPENEPFDEDQHTQITKVTRT RPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Phosphatase
Protein Pathways	Endometrial cancer, Focal adhesion, Glioma, Inositol phosphate metabolism, Melanoma, p53 signaling pathway, Pathways in cancer, Phosphatidylinositol signaling system, Prostate cancer, Small cell lung cancer, Tight junction

Full Length
Full L.

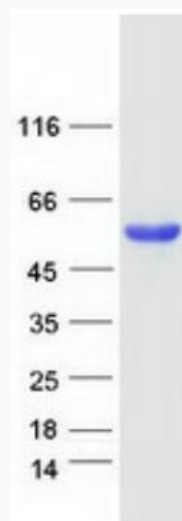
GENE INFORMATION

Gene Name	PTEN phosphatase and tensin homolog [Homo sapiens (human)]
Official Symbol	PTEN
Synonyms	BZS; DEC; CWS1; GLM2; MHAM; TEP1; MMAC1; PTEN1; 10q23del; PTENbeta
Gene ID	5728
mRNA Refseq	NM_000314.8
Protein Refseq	NP_000305.3
MIM	601728
UniProt ID	P60484

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Coomassie blue staining of purified PTEN protein.

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