

Product datasheet for PH302627

PTEN (NM_000314) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	PTEN MS Standard C13 and N15-labeled recombinant protein (NP_000305)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC202627
Predicted MW:	47.2 kDa
Protein Sequence:	>RC202627 protein sequence Red=Cloning site Green=Tags(s)

MTAIIKEIVSRNKRRYQEDGFDLDTYIYPNIIAMGFPAERLEGVYRNNIDDVVRFLDSKHKNHYKIYNL
CAERHYDTAKFNCRVAQYPFEDHNPPQLELIKPFCELDQWLEDNHNVAAIHCKAGKGRGVMICAYLL
HRGKFLKAQEALDFYGEVTRDKKGVITPSQRRYVYYSYLLKNHLDYRPVALLFHKMMFETIPMFSGGT
CNPQFVVCQLKVKIYSSNSGPTREDKFMYFEPQPLVCGDIKVEFFHKQNKMLKDKMFHFVNTFFI
PGPEETSEKVENGLCDQEIDSICSIERADNDKEYLVLTLTKNDLDKANKDKANRYFSPNFKVKLYFTKT
VEEPSNPEASSSTSVTPDVSDNEPDHYRYSDDTDDSPENEPFDEDQHTQITKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	NP_000305
RefSeq Size:	5572
RefSeq ORF:	1209
Synonyms:	10q23del; BZS; CWS1; DEC; GLM2; MHAM; MMAC1; PTEN1; PTENbeta; TEP1
Locus ID:	5728



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UniProt ID: [P60484](#), [F6KD01](#)

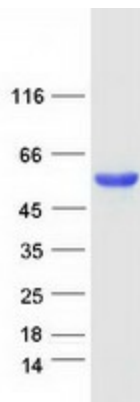
Cytogenetics: 10q23.31

Summary: 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. [provided by RefSeq, Feb 2015]

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

Product images:



Coomassie blue staining of purified PTEN protein (Cat# [TP302627]). The protein was produced from HEK293T cells transfected with PTEN cDNA clone (Cat# [RC202627]) using MegaTran 2.0 (Cat# [TT210002]).