

## Product datasheet for **AR09238PU-S**

### PTEN (1-403, His-tag) Human Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	PTEN (1-403, His-tag) human recombinant protein, 20 µg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MTAIIEIVS RNKRRYQEDG FDLDLTYIYP NIIAMGFPAE RLEGVYRNNI DDVVRFLDSK HKNHYKIYNL CAERHYDTAK FNCRVAQYPF EDHNPPQLEL IKPFCELDLQ WLSEDDNHVA AIHCKAGKGR TGVMICAYLL HRGKFLKAQE ALDFYGEVRT RDKKGV TIPS QRRYVYYYSY LLKNHLDYRP VALLFHKMMF ETIPMFSGGT CNPQFVVCQL KVKIYSSNSG PTRREDKFMY FEFQPLPVC GDIKVEFFHK QNKMLKKDKM FHFVWNTFFI PGPEETSEKV ENGLCDQEI DSICSIERAD NDKEYLVLT TLTKNDLDKANK DKANRYFSPN FKVKLYFTKT VEEPSNPEAS SSTSVPDVS DNEPDHYRYS DTTDSDPENE PFDEDQHTQI TKV
Tag:	His-tag
Predicted MW:	49.3 kDa
Concentration:	lot specific
Purity:	>85% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM EDTA, 2 mM DTT, 100 mM NaCl, and 20% glycerol
Preparation:	Liquid purified protein
Protein Description:	Recombinant PTEN protein, fused to His-tag, was expressed in E.coli and purified by using conventional chromatography techniques.
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	<a href="#">NP_000305</a>
Locus ID:	5728
UniProt ID:	<a href="#">P60484</a> , <a href="#">F6KD01</a>



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**Cytogenetics:** 10q23.31

**Synonyms:** 10q23del; BZS; CWS1; DEC; GLM2; MHAM; MMAC1; PTEN1; PTENbeta; TEP1

**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:

