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# PTEN Knockout HeLa Cell Lysate, Homozygous

**Catalog No.: RM01987**

## Basic Information

**Catalog No.**
RM01987

**Category**
Cell Lysate

**Parental Cell line**
HeLa

**Genotype**
Knockout

## Gene Information

**Gene Symbol**
PTEN

**Species**
Human

**Gene ID**
5728

**Swiss Prot**
P60484

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

## Contact


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## Background

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]

## Product Information

**Description**
PTEN Knockout HeLa Cell Line is engineered from HeLa cell line with Gene-Editing technology.
Allele-1:4bp deletion in exon5
Allele-2:4bp deletion in exon5
Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles. Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins. Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

**Packaging**
1 vial parental cell Lysate and 1 vial knockout cell Lysate

**Shipping Conditions**
4℃

**Amount**
50μL, 2μg/μL.

**Storage**
Store at -20℃

**Protocol**
To be used as WB control. Lysate is supplied in 1× SDS sample buffer (2% SDS, 60 mM Tris-HCl pH 6.8, 10% Glycerol, 0.02% Bromophenol blue, 60 mM beta-mercaptoethanol). Lysate should be boiled for 3 - 5 minutes before loading onto gel.

## Sequencing data




Genome sequence analysis of PCR products from parental (WT) and PTEN knockout (KO) HeLa cells, using sanger sequencing.