

PTEN Protein

Full-length recombinant protein expressed in E. coli cells

Catalog # P23-34G

Lot # C185-1

Product Description

Recombinant full-length human PTEN was expressed in E. coli cells using an N-terminal GST tag. The gene accession number is [NM_000314](#).

Gene Aliases

BZS, MHAM, TEP1, MMAC1, PTEN1, MGC11227

Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 50mM NaCl, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

Storage and Stability

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

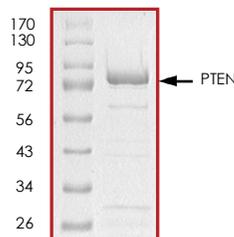
Scientific Background

PTEN (phosphatase and tensin homolog) is a tumor suppressor that is frequently mutated in a large number of cancers (1). PTEN has phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase activity and 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, PTEN preferentially dephosphorylates phosphoinositide substrates and is responsible for negatively regulating the intracellular levels of phosphatidylinositol-3,4,5-trisphosphate in cells. PTEN functions as a tumor suppressor by negatively regulating the PI3K/AKT signaling pathway (2).

References

1. Butler, M.G. et al: Subset of individuals with autism spectrum disorders and extreme macrocephaly associated with germline PTEN tumour suppressor gene mutations. J. Med. Genet. 2005;42(4):318-21.
2. Steck, P.A. et al: Identification of a candidate tumour suppressor gene, MMAC1, at chromosome 10q23.3 that is mutated in multiple advanced cancers. Nat. Genet. 1997; 15(4):356-62.

Purity



The purity of PTEN was determined to be **>95%** by densitometry, approx. MW **76kDa**.

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Catalog #	P23-34G
Lot #	C185-1
Purity	>95%
Concentration	0.2 µg/µl
Stability	1 yr at -70°C from date of shipment
Storage & Shipping	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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