

Product datasheet for PH306746

PDPK1 (NM_031268) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	PDPK1 MS Standard C13 and N15-labeled recombinant protein (NP_112558)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC206746
Predicted MW:	48.2 kDa
Protein Sequence:	>RC206746 protein sequence Red=Cloning site Green=Tags(s)

MARTTSQLYDAVPIQSSVVLCSPPSPMVRTQTESSTPPGIPGGSRQGPAMDGTAEPGAGSLQHAQP
PPQPRKKRPEDFKFGKILGEGSFSTVVLARELATRSREYATRANFVGTAYVSPPELLTEKSACKSSDLWA
LGCIIYQLVAGLPPFRAGNEYLIFQKIIKLEYDFPEKFFPKARDLVEKLLVLDATKRLGCEEMEGYGLK
AHPFFESVTWENLHQQTTPKLTAYLPAMSEDDDCYGNYNLLSQFGCMQVSSSSSSHLSASDTGLPQR
SGSNIEQYIHDLDNSFELDLQFSEDEKRLLEKQAGGNPWHQFVENNLILKMGVPDKRGLFARRRQLL
LTEGPHLYYVDPVNVKVLKGEIPWSQELRPEAKNFKTFVHTPNRTYYLMDPSGNAHKWCRKIQEVWRQRY
QSHPDAAVQ

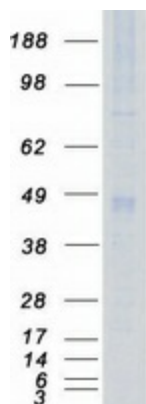
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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:	<u>NP_112558</u>
RefSeq Size:	6862
RefSeq ORF:	1287
Synonyms:	PDK1; PDPK2; PDPK2P; PRO0461



[View online »](#)

Locus ID:	5170
UniProt ID:	O15530
Cytogenetics:	16p13.3
Summary:	<p>Serine/threonine kinase which acts as a master kinase, phosphorylating and activating a subgroup of the AGC family of protein kinases. Its targets include: protein kinase B (PKB/AKT1, PKB/AKT2, PKB/AKT3), p70 ribosomal protein S6 kinase (RPS6KB1), p90 ribosomal protein S6 kinase (RPS6KA1, RPS6KA2 and RPS6KA3), cyclic AMP-dependent protein kinase (PRKACA), protein kinase C (PRKCD and PRKCZ), serum and glucocorticoid-inducible kinase (SGK1, SGK2 and SGK3), p21-activated kinase-1 (PAK1), protein kinase PKN (PKN1 and PKN2). Plays a central role in the transduction of signals from insulin by providing the activating phosphorylation to PKB/AKT1, thus propagating the signal to downstream targets controlling cell proliferation and survival, as well as glucose and amino acid uptake and storage. Negatively regulates the TGF-beta-induced signaling by: modulating the association of SMAD3 and SMAD7 with TGF-beta receptor, phosphorylating SMAD2, SMAD3, SMAD4 and SMAD7, preventing the nuclear translocation of SMAD3 and SMAD4 and the translocation of SMAD7 from the nucleus to the cytoplasm in response to TGF-beta. Activates PPARG transcriptional activity and promotes adipocyte differentiation. Activates the NF-kappa-B pathway via phosphorylation of IKKB. The tyrosine phosphorylated form is crucial for the regulation of focal adhesions by angiotensin II. Controls proliferation, survival, and growth of developing pancreatic cells. Participates in the regulation of Ca(2+) entry and Ca(2+)-activated K(+) channels of mast cells. Essential for the motility of vascular endothelial cells (ECs) and is involved in the regulation of their chemotaxis. Plays a critical role in cardiac homeostasis by serving as a dual effector for cell survival and beta-adrenergic response. Plays an important role during thymocyte development by regulating the expression of key nutrient receptors on the surface of pre-T cells and mediating Notch-induced cell growth and proliferative responses. Provides negative feedback inhibition to toll-like receptor-mediated NF-kappa-B activation in macrophages. Isoform 3 is catalytically inactive.[UniProtKB/Swiss-Prot Function]</p>
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Endometrial cancer, Focal adhesion, Insulin signaling pathway, mTOR signaling pathway, Non-small cell lung cancer, PPAR signaling pathway, Prostate cancer

Product images:

Coomassie blue staining of purified PDPK1 protein (Cat# [TP306746]). The protein was produced from HEK293T cells transfected with PDPK1 cDNA clone (Cat# [RC206746]) using MegaTran 2.0 (Cat# [TT210002]).