

Recombinant Full Length Human PRKG1 Protein, C-Flag-tagged

Cat. No. PRKG1-1912HFL Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human PRKG1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
Description	Mammals have three different isoforms of cyclic GMP-dependent protein kinase (Ialpha, Ibeta, and II). These PRKG isoforms act as key mediators of the nitric oxide/cGMP signaling pathway and are important components of many signal transduction processes in diverse cell types. This PRKG1 gene on human chromosome 10 encodes the soluble Ialpha and Ibeta isoforms of PRKG by alternative transcript splicing. A separate gene on human chromosome 4, PRKG2, encodes the membrane-bound PRKG isoform II. The PRKG1 proteins play a central role in regulating cardiovascular and neuronal functions in addition to relaxing smooth muscle tone, preventing platelet aggregation, and modulating cell growth. This gene is most strongly expressed in all types of smooth muscle, platelets, cerebellar Purkinje cells, hippocampal neurons, and the lateral amygdala. Isoforms Ialpha and Ibeta have identical cGMP-binding and catalytic domains but differ in their leucine/isoleucine zipper and autoinhibitory sequences and therefore differ in their dimerization substrates and kinase enzyme activity.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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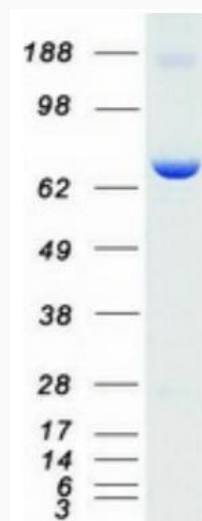
Molecular Mass	77.6 kDa
AA Sequence	MGTLRDLQYALQEKIEELRQRDALIDELELELDQKDELIQKLQNELDKYRSVIRPATQ QAQKQSASTLQG EPRTKRQAISAEPTAFDIQDLSHVTLPFYKSPQSKDLIKEAILDN DFMKNLELSQIQEIVDCMYPVEYG KDSCIIKEGDVGSVYAMEDGKVEVTKEGVKLC TMGPGKVFGELAILYNCTRTATVKTLVNVKLWAIDRQ CFQTIMMRTGLIKHTEYMEF LKSVPFQSLPEEILSKLADVLEETHYENGEYIIRQGARGDTFFIISKGT VNVTREDSP SEDPVFLRTLKGKGDWFGKALQGEDVRTANVIAAEAVTCLVIDRDSFKHLIGGLDDV SNKA YEDAEAKAKYEAEEAFFANLKLSDFNIIIDTLGVGGFGRVELVQLKSEESKTFA MKILKKRHIVDTRQQEH IRSEKQIMQGAHSDFIVRLYRTFKDSKYLYMLMEACLGGE LWTILRDRGSFEDSTTRFYTACVVEAFAYL HSKGIIYRDLKPENLILDHRGYAKLVDF GFAKKIGFGKKTWTFCTPEYVAPEIILNKGHDISADYWSLG ILMYELLTGSPPFSGP DPMKTYNIILRGIDMIEFPKKIAKNAANLIKLCRDNPSERLGNLKNVVKDIQK HKWF EGFNWEGLRKGTLPPIPSVASPTDTSNFDSFPEDNDEPPPPDDNSGWDIDF TRTR PLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Protein Kinase

Protein Pathways	Gap junction, Long-term depression, Olfactory transduction, Vascular smooth muscle contraction
Full Length	Full L.
GENE INFORMATION	
Gene Name	PRKG1 protein kinase cGMP-dependent 1 [Homo sapiens (human)]
Official Symbol	PRKG1
Synonyms	PKG; cGK; AAT8; PKG1; cGK1; cGKI; cGK 1; PRKG1B; PRKGR1B; cGKI-BETA; cGKI-alpha
Gene ID	5592
mRNA Refseq	NM_006258.4
Protein Refseq	NP_006249.1
MIM	176894
UniProt ID	Q13976

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Coomassie blue staining of purified PRKG1 protein.