

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

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

## SPECIFICATION

<b>Product Overview</b>	Recombinant Full Length Human PRKG1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
<b>Species</b>	Human
<b>Source</b>	Mammalian Cells
<b>Description</b>	<p>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.</p>
<b>Form</b>	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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<b>Molecular Mass</b>	77.6 kDa
<b>AA Sequence</b>	<p>MGTLRDLQYALQEKIEELRQRDALIDELELELDQKDELIQKLNELDKYRSVIRPATQ          QAQKQSASTLQG EPRTKRQAISAEPTAFDIQDLSHVTLPFYKSPQSKDLIKEAILDN          DFMKNLELSIQEIVDCMYPVEYG KDSCIIKEGDVGSVYAMEDGKVEVTKEGVKLC          TMGPGKVFGE LAILYNCTRTATVKTLVNVKLWAIDRQ CFQTIMMRTGLIKHTEYMEF          LKSVPTFQSLPEEILSKLADVLEETHYENGEYIIRQGARGDTFFIISKGT VNVTREDSP          SEDPVFLRTLKGKDWFGKALQGEDVRTANVIAAEAVTCLVIDRDSFKHLIGGLDDV          SNKA YEDAEAKAKYEAEAAFFANLKLSDFNIIIDTLGVGGFGRVELVQLKSEESKTFA          MKILKKRHIVDTRQQEH IRSEKQIMQGAHSDFIVRLYRTFKDSKYLYMLMEACLGG          LWTILRDRGSFEDSTTRFYTACVVEAFAYL HSKGIIYRDLKPENLILDHRGYAKLVDF          GFAKKIGFGKKTWTFCTPEYVAPEIILNKGHDISADYWSLG ILMYELLTGSPPFSGP          DPMKTYNIILRGIDMIEFPKIAKNAANLIKLCRDNP SERLGNLKNVVKDIQK HKWF          EGFNWEGLRKGTLTPPIIPSVASPTDTSNFDSFPEDNDEPPPDDNSGWDIDF TRTR          PLEQKLISEEDLAANDILDYKDDDDKV</p>
<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining.
<b>Stability</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Storage</b>	Store at -80 centigrade.
<b>Concentration</b>	>50 ug/mL as determined by microplate BCA method.
<b>Preparation</b>	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
<b>Protein Families</b>	Druggable Genome, Protein Kinase

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**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

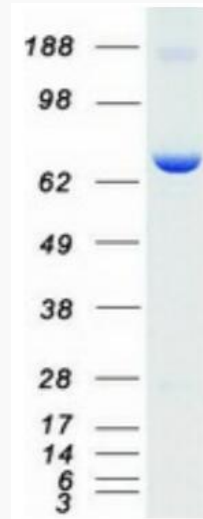
**MIM** 176894

**UniProt ID** Q13976


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Coomassie blue staining of purified PRKG1 protein.

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