

Product datasheet for RC211172

PGK1 (NM_000291) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PGK1 (NM_000291) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PGK1
Synonyms:	HEL-S-68p; MIG10; PGKA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211172 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGCTTTCTAACAGCTGACGCTGGACAAGCTGGACGTTAAAGGGAAGCGGGTCGTTATGAGAGTCG
ACTTCAATGTTCCATGAAGAACAACCAGATAACAAACAACCAGAGGATTAAGGCTGCTGTCCCAAGCAT
CAAATTCTGCTGGACAATGGAGCCAAGTCGGTAGTCCTTATGAGCCACCTAGGCCGGCCTGATGGTGTG
CCCATGCCTGACAAGTACTCCTTAGAGCCAGTTGCTGTAGAACTCAAATCTCTGTGGGCAAGGATGTC
TGTTCTTGAAGGACTGTGTAGGCCAGAAGTGGAGAAAGCCTGTGCCAACCCAGCTGCTGGTCTGTCAT
CCTGCTGGAGAACCTCCGCTTTCATGTGGAGGAAGAAGGGAAGGAAAAGATGCTTCTGGGAACAAGTT
AAAGCCGAGCCAGCCAAAATAGAAGCTTCCGAGCTTCACTTTCCAAGCTAGGGGATGTCTATGTCAATG
ATGCTTTTGGCACTGCTCACAGAGCCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGTGG
GTTTTTGTGAAGAAGGAGCTGAAGTACTTTGCAAAGGCCTTGGAGAGCCAGAGCGACCCTTCTGGCC
ATCCTGGGCGGAGCTAAAGTTGCAGACAAGATCCAGCTCATCAATAATATGCTGGACAAAGTCAATGAGA
TGATTATTGGTGGTGAATGGCTTTTACCTTCCCTAAGGTGCTCAACAACATGGAGATTGGCACTTCTCT
GTTTGTGAAGAGGGAGCCAAGATTGTCAAAGACCTAATGTCAAAGCTGAGAAGAATGGTGTGAAGATT
ACCTTGCTGTTGACTTTGCTACTGCTGACAAGTTTGTGAGAATGCCAAGACTGGCCAAGCCACTGTGG
CTTCTGGCATACTGCTGGCTGGATGGCTTGGACTGTGGTCTGAAAGCAGCAAGAAGTATGCTGAGGC
TGTCACTCGGGCTAAGCAGATTGTGTGGAATGGTCTGTGGGGTATTTGAATGGGAAGCTTTTGCCCGG
GGAACCAAAGCTCTCATGGATGAGGTGGTAAAAGCCACTTCTAGGGGCTGCATCACCATCATAGGTGGT
GAGACTGCCACTTGTGTGCCAAATGGAACACGGAGGATAAAGTCAGCCATGTGAGCACTGGGGTGG
TGCCAGTTGGAGCTCCTGGAAGGTAAGTCCTTCTGGGGTGGATGCTCTCAGCAATATT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC211172 protein sequence
Red=Cloning site Green=Tags(s)

MSLSNKL TLDKLDVKGKRVVVRVDFNVPKNNQITNNQRIKAAVPSIKFCLDNGAKSVVLSHMLGRPDGV
PMPDKYSLEPVAVELKSLGKDVLFKDCVGPVEKACANPAAGSVILLENLRFHVEEKGKGDASGNKV
KAEPAKIEAFRASLSKLDVYVNDAFGT A HRAHSSMVGVNLPQKAGGFLMKKELNYFAKALESPPERFLA
ILGGAKVADKIQLINNMLDKVNEMIIGGMAFTFLKVLNNMEIGTSLFDEEGAKIVKDLMSKAENGVKI
TLPVDFVTADKFDENAKTGQATVASGIPAGWMGLDCGPESKKYAEAVTRAKQIVWNGPVGWFEWAFAR
GTKALMDEVVKATSRGCITTIIGGGDTATCCAkwntEDKvshVSTGGGASLELLEGGKVLPGVDALSNI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6130_b05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000291

ORF Size: 1251 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_000291.4](#)

RefSeq Size: 2439 bp

RefSeq ORF: 1254 bp

Locus ID: 5230

UniProt ID: [P00558](#)

Cytogenetics: Xq21.1

Domains: PGK

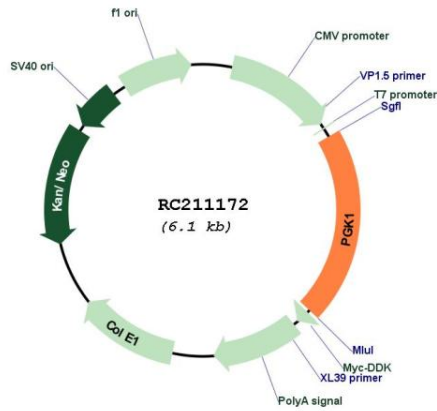
Protein Families: Druggable Genome

Protein Pathways: Glycolysis / Gluconeogenesis, Metabolic pathways

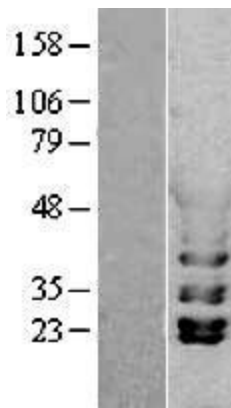
MW: 44.6 kDa

Gene Summary: The protein encoded by this gene is a glycolytic enzyme that catalyzes the conversion of 1,3-diphosphoglycerate to 3-phosphoglycerate. The encoded protein may also act as a cofactor for polymerase alpha. Additionally, this protein is secreted by tumor cells where it participates in angiogenesis by functioning to reduce disulfide bonds in the serine protease, plasmin, which consequently leads to the release of the tumor blood vessel inhibitor angiostatin. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Deficiency of the enzyme is associated with a wide range of clinical phenotypes hemolytic anemia and neurological impairment. Pseudogenes of this gene have been defined on chromosomes 19, 21 and the X chromosome. [provided by RefSeq, Jan 2014]

Product images:



Circular map for RC211172



Western blot validation of overexpression lysate (Cat# [LY400114]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211172 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PGK1 protein (Cat# [TP311172]). The protein was produced from HEK293T cells transfected with PGK1 cDNA clone (Cat# RC211172) using MegaTran 2.0 (Cat# [TT210002]).