

Product datasheet for **RC201729**

PGD (NM_002631) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	PGD
Synonyms:	6PGD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC201729 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**

ATGGCCCAAGCTGACATCGCGCTGATCGGATTGGCCGTCATGGGCCAGAACTTAATTCTGAACATGAATG
 ACCACGGCTTTGTGGTCTGTGCTTTTAATAGGACTGTCTCCAAAGTTGATGATTTCTTGGCCAATGAGGC
 AAAGGGAAACAAAGTGGTGGGTGCCAGTCCCTGAAAGAGATGGTCTCCAAGCTGAAGAAGCCCCGCGG
 ATCATCTCTGGTGAAGGCTGGCAAGCTGTGGATGATTTATCGAGAAATTGGTACCATTGTTGGATA
 CTGGTGACATCATCATTGACGGAGGAAATCTGAATATAGGGACACCACAAGACGGTGCCGAGACCTCAA
 GGCCAAGGAATTTATTTGTGGGAGCGGAGTCACTGGTGGAGAGGAAGGGGCCGGTATGGCCCATCG
 CTCATGCCAGGAGGGAACAAAGAAGCGTGGCCCCACATCAAGACCATCTTCAAGGCATTGCTGCAAAAG
 TGGGAAGTGGAGAACCCTGCTGTGACTGGGTGGGAGATGAGGGAGCAGGCCACTTCGTGAAGATGGTGCA
 CAACGGGATAGAGTATGGGGACATGCAGCTGATCTGTGAGGCATACCACCTGATGAAAGACGTGCTGGGC
 ATGGCGCAGGACGAGATGGCCAGGCCTTTGAGGATTGGAATAAGACAGAGCTAGACTCATTCTCTGATTG
 AAATCACAGCCAATATTCTCAAGTTCCAAGACACCGATGGCAAACACCTGCTGCCAAAGATCAGGGACAG
 CGCGGGGACAGAGGGACAGGGAAGTGGACCGCCATCTCCGCCCTGGAATACGGCGTACCCGTACCCCTC
 ATTGGAGAAGCTGTCTTTGCTCGGTGCTTATCATCTCTGAAGGATGAGAGAATTCAGCTAGCAAAAAGC
 TGAAGGGTCCCCAGAAGTCCAGTTTGATGGTGATAAGAAATCATTCTGGAGGACATTCGGAAGGCACT
 CTACGCTTCCAAGATCATCTCTTACGCTCAAGGCTTTATGCTGCTAAGGCAGGCAGCCACCGAGTTTGGC
 TGGACTCTCAATTATGGTGGCATCGCCCTGATGTGGAGAGGGGGTGCATCATTAGAAGTGATTCTTAG
 GAAAGATAAAGGATGCATTTGATCGAAACCCGGAACCTCAGAACCTCCTACTGGACGACTCTTTAAGTC
 AGCTGTTGAAAACCTGCCAGGACTCTGGCGGCGGCAGTCAGCACTGGGGTCCAGGCTGGCATTCCCATG
 CCCTGTTTTACCACTGCCCTCTCTTCTATGACGGGTACAGACATGAGATGCTTCCAGCCAGCCTCATCC
 AGGCTCAGCGGGATTACTTCGGGGCTCACACCTATGAACTCTTGCCAAACCAGGGCAGTTTATCCACAC
 CAACTGGACAGGCCATGGTGGCACCGTGTATCTCGTCATACAATGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201729 protein sequence
 Red=Cloning site Green=Tags(s)

MAQADIALIGLAVMGQNLILNMNDHGFVVCANRTVSKVDDFLANEAKGTVVGAQSLKEMVSKLKKPRR
 IILLVKAGQAVDDFIEKLVPLLDTGDIIIDGGNSEYRDTTRRCRDLKAKGILFVSGVSGGEEGARYGPS
 LMPGGNKEAWPHIKTIFQGIAAKVGTGEPCCDWVGDEGAGHFVKMVHNGIEYGMQLICEAYHLMKDVLG
 MAQDEMAQAFEDWNKTELSFLIEITANILKFQDTDGKHLHPKIRDSAGQKGTGKWTASALEYGVPTL
 IGEAVFARCLSSLKDERIQASKKLGPQKFQFDGDKKSFLDIRKALYASKIISYAQGFMLLRQAATEFG
 WTLNYYGIALMWRGGCIIRSVFLGKIKDAFDRNPELQNLLLDDFFKSAVENCQDSWRRRAVSTGVQAGIPM
 PCFTTALSFYDGYRHEMLPASLIQAQRDYFGAHTYELLAKPGQFIHTNWTGHGGTVSSSSSYNA

TRTRPLE**QKLISEEDLAANDILDYKDDDDKV**

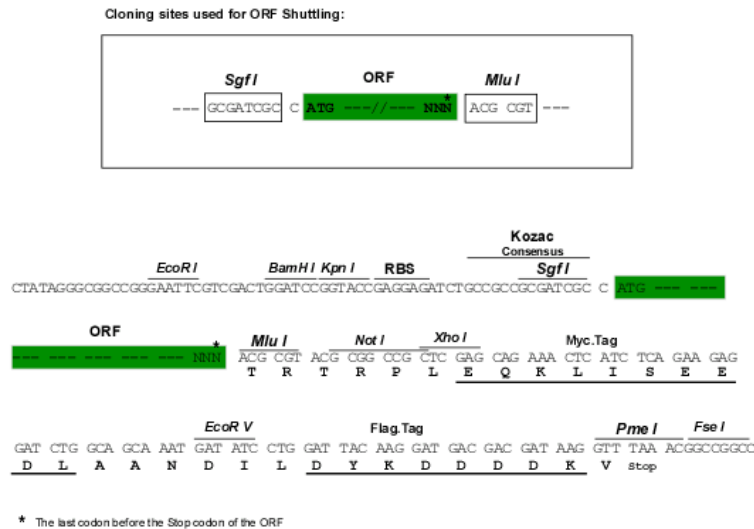
Chromatograms:

https://cdn.origene.com/chromatograms/mk6376_g04.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_002631

ORF Size: 1449 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_002631.4](#)

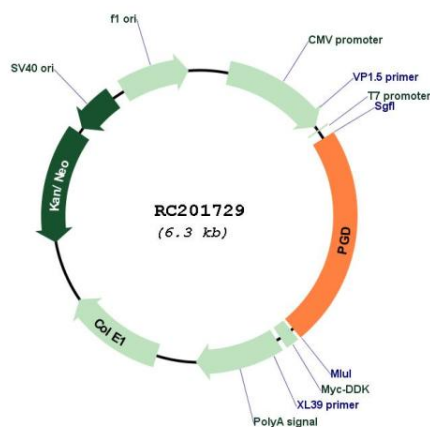
RefSeq Size: 1937 bp

RefSeq ORF: 1452 bp

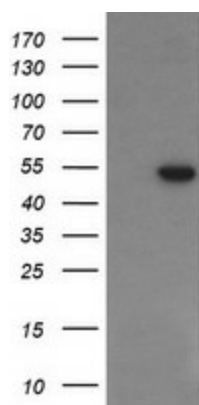
Locus ID: 5226

UniProt ID:	P52209
Cytogenetics:	1p36.22
Domains:	6PGD, NAD_binding_2
Protein Pathways:	Glutathione metabolism, Metabolic pathways, Pentose phosphate pathway
MW:	53.1 kDa
Gene Summary:	6-phosphogluconate dehydrogenase is the second dehydrogenase in the pentose phosphate shunt. Deficiency of this enzyme is generally asymptomatic, and the inheritance of this disorder is autosomal dominant. Hemolysis results from combined deficiency of 6-phosphogluconate dehydrogenase and 6-phosphogluconolactonase suggesting a synergism of the two enzymopathies. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2015]

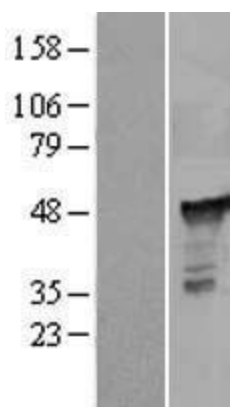
Product images:



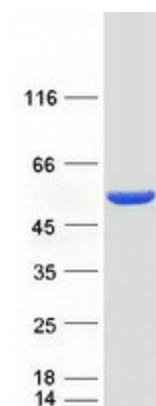
Circular map for RC201729



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PGD (Cat# RC201729, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PGD (Cat# [TA505578]). Positive lysates [LY419202] (100ug) and [LC419202] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419202]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201729 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PGD protein (Cat# [TP301729]). The protein was produced from HEK293T cells transfected with PGD cDNA clone (Cat# RC201729) using MegaTran 2.0 (Cat# [TT210002]).