

Product datasheet for **RC202960**

QPRT (NM_014298) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	QPRT
Synonyms:	HEL-S-90n; QPRTase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202960 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGACGCTGAAGGCCTGGCGCTGCTGCTGCCGCCGTCAACCCTGGCAGCCCTGGTGGACAGCTGGCTCC
GAGAGGACTGCCCAGGGCTCAACTACGCAGCCTTGGTCAGCGGGCAGGCCCCCTCGCAGGCGGCGCTGTG
GGCCAAATCCCCTGGGATACTGGCAGGGCAGCCTTTCTTCGATGCCATATTTACCCAACCTCAACTGCCAA
GTCTCCTGGTTCTCCCCGAGGGATCGAAGCTGGTGCCGGTGGCCAGAGTGGCCGAGGTCCGGGGCCCTG
CCCACTGCCTGCTGCTGGGGGAACGGGTGGCCCTCAACACGCTGGCCCGCTGCAGTGGCATTGCCAGTGC
TGCCGCGCTGCAGTGGAGGCCGCCAGGGGGGCCGGCTGGACTGGGCACGTGGCAGGCACGAGGAAGACC
ACGCCAGGCTTCCGGCTGGTGGAGAAGTATGGGCTCCTGGTGGCGGGGCCGCTCGCACCGCTACGACC
TGGGAGGGCTGGTATGGTGAAGGATAACCATGTGGTGGCCGCCGGTGGCGTGGAGAAGGCGGTGCGGGC
GGCCAGACAGGCGGCTGACTTCGCTCTGAAGGTGGAAGTGAATGCAGCAGCCTGCAGGAGGCCGTGCAG
GCAGCTGAGGCTGGTGCCGACCTTGTCTGCTGGACAATTCAAGCCAGAGGAGCTGCACCCACGGCCA
CCGTGCTGAAGGCCAGTTCCTCGAGTGTGGCTGTGGAAGCCAGTGGGGGCATCACCTGGACAACCTCCC
CCAGTTCTGCGGGCCGCACATAGACGTCATCTCCATGGGGATGCTGACCCAGGCGGCCCCAGCCCTTGAT
TTCTCCCTCAAGCTGTTTGCCAAAGAGGTGGCTCCAGTGCCCAAAATCCAC

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC202960 protein sequence
 Red=Cloning site Green=Tags(s)

MDAEG LALLLPPVTLAALVDSWLREDCPGLNYAALVSGAGPSQAALWAKSPGILAGQPFFDAIFTQLNCQ
 VSWFLPEGSKLVPVARVAEVRGPAHCLLLGERVALNTLARC SGIASAAAAAEEAARGAGWTGHVAGTRKT
 TPGFRLVEKYGLLVGGAASHRYDLGGLVMYKDNHVVAAAGGVEKAVRAARQAADFALKVEVECSSLQEA VQ
 AAEAGADLVLLDNFKPEELHPTATVLKAQFPSSVAVEASGGITLDNLPQFCGPHIDVISMGMLTQAAPALD
 FSLKLFAKEVAPVPKIH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6144_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_014298

ORF Size: 891 bp

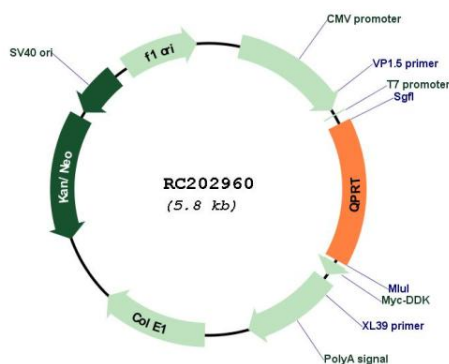
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

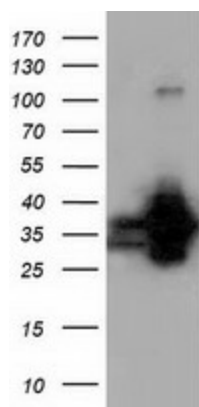
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none"> 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:	<u>NM_014298.6</u>
RefSeq Size:	1575 bp
RefSeq ORF:	894 bp
Locus ID:	23475
UniProt ID:	<u>Q15274</u>
Cytogenetics:	16p11.2
Domains:	QRPTase
Protein Pathways:	Metabolic pathways, Nicotinate and nicotinamide metabolism
MW:	30.8 kDa
Gene Summary:	<p>This gene encodes a key enzyme in catabolism of quinolinate, an intermediate in the tryptophan-nicotinamide adenine dinucleotide pathway. Quinolinate acts as a most potent endogenous exitotoxin to neurons. Elevation of quinolinate levels in the brain has been linked to the pathogenesis of neurodegenerative disorders such as epilepsy, Alzheimer's disease, and Huntington's disease. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2015]</p>

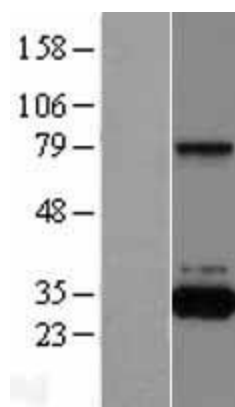
Product images:



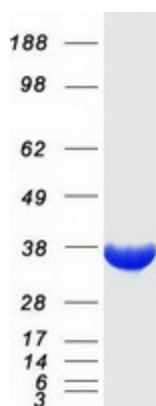
Circular map for RC202960



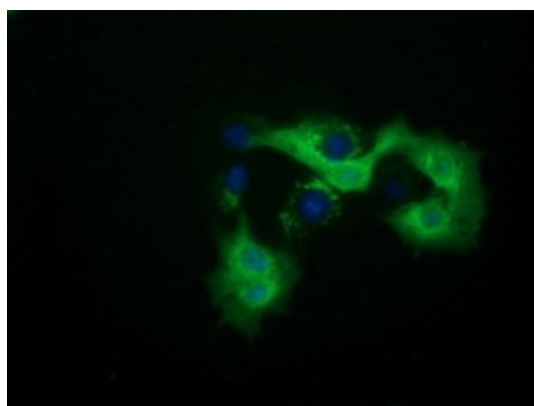
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY QPRT (Cat# RC202960, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-QPRT (Cat# [TA501524]). Positive lysates [LY402307] (100ug) and [LC402307] (20ug) can be purchased separately from OriGene.



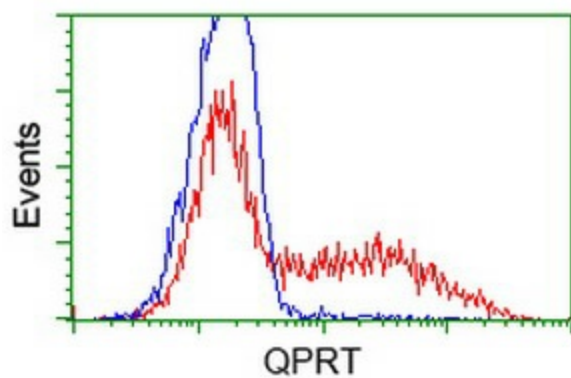
Western blot validation of overexpression lysate (Cat# [LY402307]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202960 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified QPRT protein (Cat# [TP302960]). The protein was produced from HEK293T cells transfected with QPRT cDNA clone (Cat# RC202960) using MegaTran 2.0 (Cat# [TT210002]).



Anti-QPRT mouse monoclonal antibody ([TA501524]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY QPRT (RC202960).



HEK293T cells transfected with either RC202960 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-QPRT antibody ([TA501524]), and then analyzed by flow cytometry.