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Product datasheet for RC202889

NQO2 (NM_000904) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NQO2 (NM_000904) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NQO2
Synonyms:	DHQV; DIA6; NMOR2; QR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC202889 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGGTAAGAAAGTACTCATTGTCTATGCACACCAGGAACCCAAGTCTTTCAACGGATCCTTGAAGA
ATGTGGCTGTAGATGAACTGAGCAGGCAGGGCTGCACCGTCACAGTGTCTGATTTGTATGCCATGAACTT
TGAGCCGAGGGCCACAGACAAAGATATCACTGGTACTCTTTCTAATCCTGAGGTTTTCAATTATGGAGTG
GAAACCCACGAAGCCTACAAGCAAAGGTCTCTGGCTAGCGACATCACTGATGAGCAGAAAAAGGTTCGGG
AGGCTGACCTAGTGATATTTCAGTTCCCGCTGTACTGGTTCAGCGTGCCGGCCATCCTGAAGGGCTGGAT
GGATAGGGTGCTGTGCCAGGGCTTTGCCTTTGACATCCCAGGATTCTACGATTCCGGTTTGCTCCAGGGT
AAACTAGCGCTCCTTTCCGTAACCACGGGAGGCACGGCCGAGATGTACACGAAGACAGGAGTCAATGGAG
ATTCTCGATACTTCCTGTGGCCACTCCAGCATGGCACATTACACTTCTGTGGATTTAAAGTCCTTGCCCC
TCAGATCAGCTTTGCTCCTGAAATTGCATCCGAAGAAGAAAGAAAGGGGATGGTGGCTGCGTGGTCCCAG
AGGCTGCAGACCATCTGGAAGGAAGAGCCCATCCCCTGCACAGCCCACTGGCACTTCGGGCAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC202889 protein sequence
Red=Cloning site Green=Tags(s)

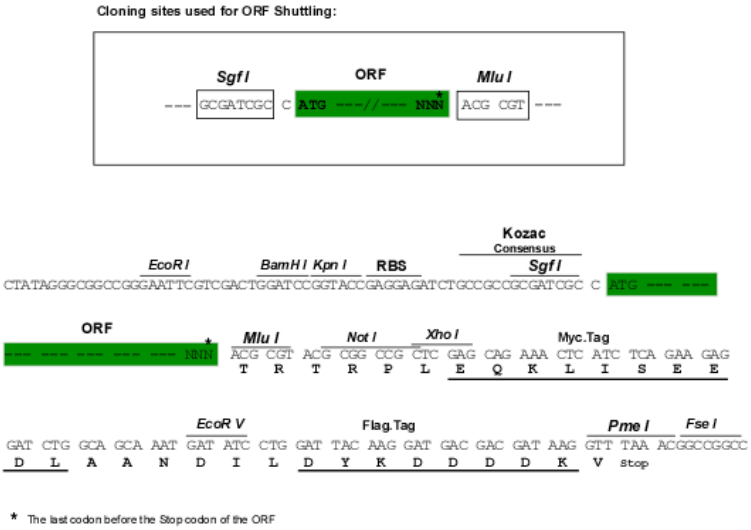
MAGKKVLIVYAHQEPKSFNGSLKNVAVDELSRQGCTVTVSDLYAMNFEPRATDKDITGTLSNPEVFNYGV
ETHEAYKQRSLASDITDEQKKVREADLVIFQFPLYWFSVPAILKGWMDRVLCQGFAFDIPGFYDSGLLQG
KLALLSVTTGGTAEMYTKTGVNGDSRYFLWPLQHGTLHFCGFKVLAPQISFAPEIASEEERKGMVAAWSQ
RLQTIWKEEPIPCTAHWHFGQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6411_c04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000904

ORF Size: 693 bp

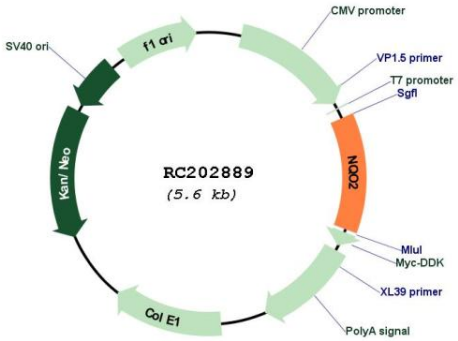
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially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

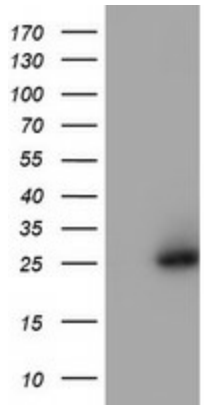
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_000904.2
RefSeq Size:	1272 bp
RefSeq ORF:	696 bp
Locus ID:	4835
UniProt ID:	P16083
Cytogenetics:	6p25.2
Domains:	Flavodoxin_2
MW:	26 kDa
Gene Summary:	This gene encodes a member of the thioredoxin family of enzymes. It is a cytosolic and ubiquitously expressed flavoprotein that catalyzes the two-electron reduction of quinone substrates and uses dihydronicotinamide riboside as a reducing coenzyme. Mutations in this gene have been associated with neurodegenerative diseases and several cancers. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2014]

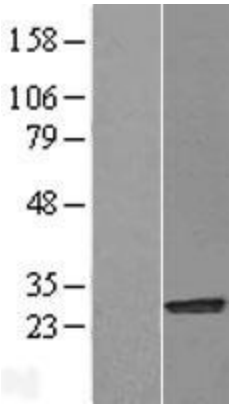
Product images:



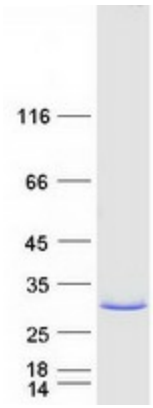
Circular map for RC202889



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NQO2 (Cat# RC202889, 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-NQO2(Cat# [TA504781]). Positive lysates [LY424463] (100ug) and [LC424463] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424463]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202889 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NQO2 protein (Cat# [TP302889]). The protein was produced from HEK293T cells transfected with NQO2 cDNA clone (Cat# RC202889) using MegaTran 2.0 (Cat# [TT210002]).