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Product datasheet for MR218122

Qrich1 (NM_001114119) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Qrich1 (NM_001114119) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Qrich1
Synonyms:	2610028H07Rik; b2b2404Clo
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR218122 representing NM_001114119
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAATAATTCTCTAGAGAACACCATCTCATTTGAAGAGTACATCCGAGTAAAGGCGAGGTCTGTCCCGC
AACACAGGATGAAGGAATTTCTGGACTCACTGGCTTCTAAGGGACCAGAAGCTCTTCAGGAGTTCCAGCA
GACTGCCACCACCACCATGGTGTACCAGCAGGGTGGGAACTGCATTTATACAGACAGCACTGAAGTGGCT
GGGTCTTTGCTTGAACTTGCTTGTCCAGTCACAACCAGTGTTCAACCACAAACTCAGCAAGAGCAGCAGA
TCCAGGTTCAGCAGCCACAGCAGGTTCAGGTACAGGTGCAGGTGCAGCAGTCTCCACAACAGGTCTCAGC
TCAGCAACTTTCCCCACAGTTCACCGTTCACCAGCCTGCTGAGCAACCCATCCAGGTCCAGGTGCAGATC
CAGGGCCAAGCACCACAGTCCGCAGCCCCCTCCATTCAGACTCCATCTCTGCAGAGCCCCAGCCCCTCAC
AGCTGCAAGCAGCTCAGATCCAGGTGCAGCACGTCCAGGCGGCCCAACAGATCCAGGCTGCAGAAATCCC
AGAGGAGCATATCCCACATCAACAAATCCAGGCTCAGTTGGTAGCTGGCCAATCTCTTGCTGGGGGCCAG
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AACGGAGGGTTGGCACAGCCAGTGTCCTTCAGCCAGTGAAGAAACGCAAAGTGGACATGCCTATCACCGT
GTCCTACGCCATCTCAGGGCAGCCAGTGGCCACTGTGCTGGCCATTCCACAAGGCCAGCAACAGAGTTAT
GTGTCTTTGAGGCCAGACTTACTGACAGTAGACAGTGCCCACCTGTACAGTGCCACTGGGACCATAACTA
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GCAGCTGTAAAGCTGGAGGATGACAAGGAGAAGATGGTGGGCACCACATCTGTAGTGAAAAACTCCCATG
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GAATGGAGAAGGTGAACCCTATGACCCAGATGTACTCTACTACATTTTCCTGTGTATACAGAAGTATCTT
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GATGCTGTGGGAATGTAAGCAGCTTGGGGCACATTCCCCTTCCACACTGCTGACCACCCTCATGTTCTTT
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AGACAAAGAAGAGCCCCTCGAATCCTAAGGATAAAAGCACGAGCATCCGCTACCTGAAGGCCCTCGGAAT
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AGGTGTCCCATCAAGCTCTACGATTTCTACCTCTTTAAATGCCCTCAGAGTGTGAAAGGCCGAAATGACA
CCTTTTACCTGACACCTGAGCCAGTTGTAGCTCCCAACAGCCCAATCTGGTACTCAGTCCAGCCTATCAG
CAGAGAACAGATGGGACAGATGCTGACCCGGATCCTGGTTATACGAGAAATCCAAGAAGCCATTGCCGTG
GCCAATGCAACCACCATGCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

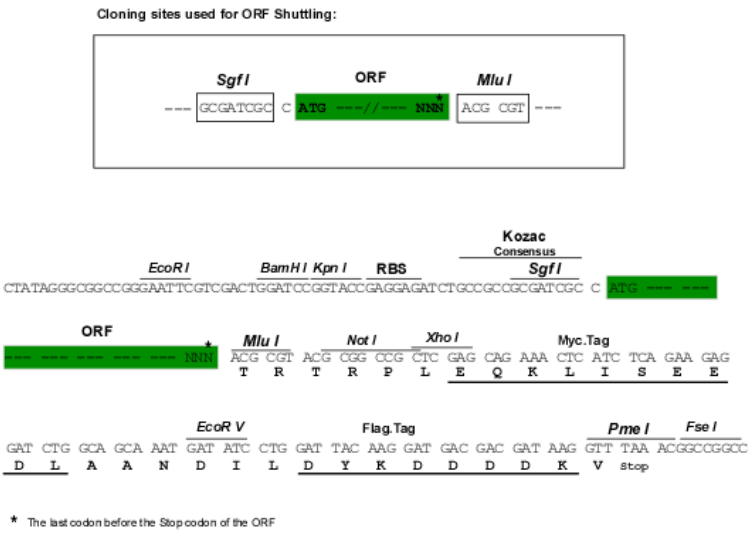
>MR218122 representing NM_001114119
Red=Cloning site Green=Tags(s)

MNNSLENTISFEEYIRVKARSVPQHRMKEFLDSLASKGPEALQEFQQTATTTMVYQQGGNCIYTDSTEVA
GSLLELACPVTTSVQPQTQQEQQIQVQQPQQVQVQVQVQQSPQQVSAQQLSPQFTVHQPAEQPIQVQVQI
QGQAPQSAAPSIQTPSLQSPSPSQLQAAQIQVQHVQAAQQIQAAEIPEEHIPHQQIQAQLVAGQSLAGGQ
QIQIQTVGALSPPPSQQGSPREGERRVGTASVLQPVKKRKVDMPITVSYAISGQPVATVLAIPQGQQQSY
VSLRPDLLTVDSAHLYSATGTITSPTGETWTIPVYSAQPRGDPQQQSITHIAIPQEAYNAVHVSGSPTAL
AAVKLEDDKEKMVGTTSVVKNSHEEVVQTLANSLFPAQFMNGNIHIPVAVQAVAGTYQNTAQTVHIWDPQ
QQPQQQTAQEQTPPPQQQQQQLQVTCSAQTVQVAEVEPQSQPQPSPELLLPNSLKPEEGLEVWKNWAQTK
NAELEKDAQNRLAPIGRRQLLRFQEDLISSAVAELNYGLCLMTREARNGEGEPYDPDVLYYIFLCIQKYL
FENGRVDDIFSDLYYVRFTEWLHEVLKDVQPRVTPLGYVLPSHVTEEMLWECKQLGAHSPSTLLTTLMFF
NTKYFLLKTVDQHMKLAFSKVLRQTKKSPSNPKDKSTSIRYLKALGIHQTGQKVTDDMYAEQTENPENPL
RCPIKLYDFYLFKCPQSVKGRNDTFYLTPEPVVAPNSPIWYSVQPISREQMGQMLTRILVIREIQEAIAV
ANATTMH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



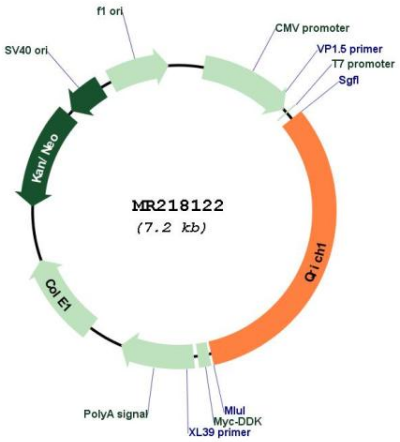
ACCN: NM_001114119

ORF Size: 2331 bp

OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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.
RefSeq:	NM_001114119.1, NP_001107591.1
RefSeq Size:	3362 bp
RefSeq ORF:	2334 bp
Locus ID:	69232
UniProt ID:	Q3UA37
Cytogenetics:	9 F2
MW:	87 kDa

Gene Summary: Transcriptional regulator that acts as a mediator of the integrated stress response (ISR) through transcriptional control of protein homeostasis under conditions of ER stress (PubMed:33384352). Controls the outcome of the unfolded protein response (UPR), an ER-stress response pathway that either promotes recovery of ER homeostasis and cell survival, or triggers the terminal UPR which elicits programmed cell death when ER stress is prolonged and unresolved (PubMed:33384352). ER stress induces QRICH1 translation by a ribosome translation re-initiation mechanism in response to EIF2S1/eIF-2-alpha phosphorylation, and stress-induced QRICH1 regulates a transcriptional program associated with protein translation, protein secretion-mediated proteotoxicity and cell death during the terminal UPR (By similarity). May cooperate with ATF4 transcription factor signaling to regulate ER homeostasis which is critical for cell viability (By similarity). Upregulates CASP3/caspase-3 activity in epithelial cells under ER stress. Central regulator of proteotoxicity associated with ER stress-mediated inflammatory diseases in the intestines and liver (PubMed:33384352). Involved in chondrocyte hypertrophy, a process required for normal longitudinal bone growth (PubMed:30281152).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR218122