

Product datasheet for **MC221501**

Qrich1 (NM_001114119) Mouse Untagged Clone

Product data:

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



[View online »](#)

Fully Sequenced ORF: >MC221501 representing NM_001114119
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAATAATTCTCTAGAGAACCACCTCTCATTTGAAGAGTACATCCGAGTAAAGGCGAGGTCTGTCCCGC
 AACACAGGATGAAGGAATTTCTGGACTCACTGGCTTCTAAGGGACCAGAAGCTCTTCAGGAGTTCCAGCA
 GACTGCCACCACCACCATGGTGTACCAGCAGGGTGGAACTGCATTTATACAGACAGCACTGAAGTGGCT
 GGGTCTTTGCTTGAACCTGCTTGTCCAGTACAACCAGTGTTCACCACAAACTCAGCAAGAGCAGCAGA
 TCCAGGTTCAGCAGCCACAGCAGGTTCAAGTACAGGTGCAGGTGCAGCAGTCTCCACAACAGGTCTCAGC
 TCAGCAACTTTCCACAGTTCCACGTTACCAGCCTGCTGAGCAACCCATCCAGGTCCAGGTGCAGATC
 CAGGGCCAAGCACAGTCCGACGCCCCCTCATTAGACTCCATCTCTGCAGAGCCCCAGCCCCCTCAC
 AGCTGCAAGCAGCTCAGATCCAGGTGCAGCACGTCCAGGGGCCAACAGATCCAGGCTGCAGAAATCCC
 AGAGGAGCATATCCACATCAACAAATCCAGGCTCAGTTGGTAGCTGGCCAATCTCTTGGTGGGGCCAG
 CAAATTCAAATTCAGACTGTGGGTGCTCTTTCCACCACCATCCAGCAGGGCTCACCCAGGGAAGGGG
 AACGGAGGGTTGGCACAGCCAGTGTCTTCAGCCAGTGAAGAAACGAAAGTGGACATGCCTATCACCGT
 GTCCTACGCCATCTCAGGGCAGCCAGTGGCCACTGTGCTGGCCATTCCACAAGGCCAGCAACAGAGTTAT
 GTGTCTTTGAGGCCAGACTTACTGACAGTAGACAGTGGCCACCTGTACAGTGCCTACTGGGACCATAACTA
 GCCCTACAGGAGAAACTTGGACCATCCCTGTTTATTCTGCCAGCCCCGGGGATCCTCAGCAGCAGAG
 CATTACGCACATTGCCATTTCCAGGAAGCCTACAATGCGGTTTATGTAGTGGCTCACCTACGGCCCTG
 GCAGCTGTAAGCTGGAGGATGACAAGGAGAAGATGGTGGCACCACATCTGTAGTAAAAACTCCCATG
 AAGAGGTAGTGCAGACCCTTGCAAACTCTCTTTCCAGCACAGTTCATGAATGGCAACATCCACATCC
 AGTGGCTGTGCAGGCTGTAGCAGGCACATACCAGAATACGGCTCAGACTGTACATATATGGGACCCACAG
 CAGCAGCCACAACAGCAAACTGCACAAGAGCAGACACCACCACAACAGCAGCAGCAGCTGCAGG
 TCCTTTGTTTCCAAATCTTTGAAGCCAGAAGAAGGGCTTGAAGTATGGAAAACTGGGCTCAGACCAAG
 AATGCTGAACTAGAAAAGGATGCTCAAAACAGATTGGCCCCATTGGGAGGCGACAGTTGCTACGATTTT
 AGGAAGATCTGATCTCTCTGCTGTGGCTGAATTGAATTATGGCCTTTGTTTATGACACGAGAAGCTCG
 GAATGGAGAAGGTGAACCCTATGACCCAGATGTACTCTACTACATTTTCTGTGTATACAGAAGTATCTT
 TTTGAAAATGGAAGAGTAGATGACATATTTTCTGATCTTTACTATGTTTCGTTTCCACGAATGGCTACATG
 AAGTTCTGAAGGATGTACAGCCTCGGGTCACTCCACTGGCTATGTGTTGCCAGTACAGTACTGAAAGA
 GATGCTGTGGGAATGTAAGCAGCTTGGGGCACATTTCCCTTCCACTGTGACCACCCTCATGTTCTTT
 AACACCAAGTACTTCTGTTGAAGACTGTAGATCAGCACATGAAGCTGGCTTTCTCTAAGGTCTCCGAC
 AGACAAAGAAGAGCCCCCGAATCCTAAGGATAAAAGCAGCAGCATCCGCTACCTGAAGGCCCTCGGAAT
 ACACCAGACTGGCCAGAAAGTTACAGATGACATGTATGCAGAGCAACAGAGAATCCAGAGAATCCACTA
 AGGTGTCCCATCAAGCTTACGATTTCTACCTTTAAATGCCCTCAGAGTGTGAAAGGCCGAAATGACA
 CCTTTTACCTGACACCTGAGCCAGTTGTAGCTCCCAACAGCCCAATCTGGTACTCAGTCCAGCCTATCAG
 CAGAGAACAGATGGGACAGATGCTGACCCGGATCCTGGTTATACGAGAAATCCAAGAAGCCATTGCCGTG
 GCCAATGCAACCACCATGCAC**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul
ACCN: NM_001114119
Insert Size: 2334 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](#)

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

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]

Transcript Variant: This variant (1) represents the longer transcript. Variants 1 and 2 encode the same protein.