

Product datasheet for **MC221500**

Qrich1 (NM_175143) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Qrich1 (NM_175143) 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)



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Fully Sequenced ORF: >MC221500 representing NM_175143
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAATAATTCTCTAGAGAACACCATCTCATTTGAAGAGTACATCCGAGTAAAGGCGAGGTCTGTCCCGC
 AACACAGGATGAAGGAATTTCTGGACTCACTGGCTTCTAAGGGACCAGAAGCTCTTCAGGAGTTCACGA
 GACTGCCACCACCACCATGGTGTACCAGCAGGGTGGAACTGCATTTATACAGACAGCACTGAAGTGGCT
 GGGTCTTTGCTTGAACCTGCTTGTCCAGTACAACAGTGTCAACCACAACTCAGCAAGAGCAGCAGA
 TCCAGGTTCAGCAGCCACAGCAGGTTCAAGTACAGGTGCAGGTGCAGCAGTCTCCACAACAGGTCTCAGC
 TCAGCAACTTTCCACAGTTCCACGTTACCAGCCTGCTGAGCAACCCATCCAGGTCCAGGTGCAGATC
 CAGGGCCAAGCACAGTCCGACAGCCCTCCATTCAGACTCCATCTCTGCAGAGCCCCAGCCCTCAC
 AGCTGCAAGCAGCTCAGATCCAGGTGCAGCACGTCCAGGGGCCAACAGATCCAGGCTGCAGAAATCCC
 AGAGGAGCATATCCACATCAACAAATCCAGGCTCAGTTGGTAGCTGGCCAATCTCTTGGTGGGGCCAG
 CAAATTCAAATTCAGACTGTGGGTGCTCTTTCCACCACCATCCAGCAGGGCTCACCCAGGGAAGGGG
 AACGGAGGGTTGGCACAGCCAGTGTCTTCAGCCAGTGAAGAAACGAAAGTGGACATGCCTATCACCGT
 GTCCTACGCCATCTCAGGGCAGCCAGTGGCCACTGTGCTGGCCATTCCACAAGGCCAGCAACAGAGTTAT
 GTGTCTTTGAGGCCAGACTTACTGACAGTAGACAGTGGCCACCTGTACAGTGCCTGGGACCATAACTA
 GCCCTACAGGAGAAACTTGGACCATCCCTGTTTATTCTGCCAGCCCCGGGGATCCTCAGCAGCAGAG
 CATTACGCACATTGCCATTTCCAGGAAGCCTACAATGCGGTTTATGTAGTGGCTCACCTACGGCCCTG
 GCAGCTGTAAGCTGGAGGATGACAAGGAGAAGATGGTGGCACCACATCTGTAGTAAAAACTCCCATG
 AAGAGGTAGTGCAGACCCTTGCAAACTCTCTTTCCAGCACAGTTCATGAATGGCAACATCCACATCC
 AGTGGCTGTGCAGGCTGTAGCAGGCACATACCAGAATACGGCTCAGACTGTACATATATGGGACCCACAG
 CAGCAGCCACAACAGCAAACTGCACAAGAGCAGACACCACCACAACAGCAGCAGCAGCTGCAGG
 TCCTTTGTTTCCAAATCTTTGAAGCCAGAAGAAGGGCTTGAAGTATGGAAAACTGGGCTCAGACCAAG
 AATGCTGAACTAGAAAAGGATGCTCAAAACAGATTGGCCCCATTGGGAGGCGACAGTGTCTACGATTTT
 AGGAAGATCTGATCTCTCTGCTGTGGCTGAATTGAATTATGGCCTTTGTTAATGACACGAGAAGCTCG
 GAATGGAGAAGGTGAACCCTATGACCCAGATGTACTCTACTACATTTTCTGTGTATACAGAAGTATCTT
 TTTGAAAATGGAAGAGTAGATGACATATTTTCTGATCTTTACTATGTTTCGTTTCCACGAATGGCTACATG
 AAGTTCTGAAGGATGTACAGCCTCGGGTCACTCCACTGGCTATGTGTTGCCAGTACAGTACTGAAAG
 GATGCTGTGGGAATGTAAGCAGCTTGGGGCACATTTCCCTTCCACTGTGACCACCCTCATGTTCTTT
 AACACCAAGTACTTCTGTTGAAGACTGTAGATCAGCACATGAAGCTGGCTTTCTCTAAGGTCCTCCGAC
 AGACAAAGAAGAGCCCTCGAATCCTAAGGATAAAAGCAGCAGCATCCGCTACCTGAAGGCCCTCGGAAT
 ACACCAGACTGGCCAGAAAGTTACAGATGACATGTATGCAGAGCAACAGAGAATCCAGAGAATCCACTA
 AGGTGTCCCATCAAGCTTACGATTTCTACCTTTAAATGCCCTCAGAGTGTGAAAGGCCGAAATGACA
 CCTTTTACCTGACACCTGAGCCAGTTGTAGCTCCCAACAGCCCAATCTGGTACTCAGTCCAGCCTATCAG
 CAGAGAACAGATGGGACAGATGCTGACCCGGATCCTGGTTATACGAGAAATCCAAGAAGCCATTGCCGTG
 GCCAATGCAACCACCATGCAC**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul
ACCN: NM_175143
Insert Size: 2334 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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.
RefSeq:	NM_175143.5 , NP_780352.2
RefSeq Size:	3238 bp
RefSeq ORF:	2334 bp
Locus ID:	69232
UniProt ID:	Q3UA37
Cytogenetics:	9 F2
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant lacks an exon in the 5' UTR compared to variant 1. Variants 1 and 2 encode the same protein.</p>