

Product datasheet for **RC211088**

QRICH1 (NM_198880) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	QRICH1 (NM_198880) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	QRICH1
Synonyms:	AB-DIP; VERBRAS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC211088 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATAATTCCTAGAGAACACCATCTCCTTTGAAGAGTACATCCGAGTAAAGGCAGGCTCTGTCCCGC
 AACACAGGATGAAGGAATTTCTGGACTCACTGGCCTCTAAGGGGCCAGAAGCCCTTCAGGAGTCCAGCA
 GACAGCCACCACTACCATGGTGTACCAACAGGGTGGAACTGCATATACAGACAGCACTGAAGTGGCT
 GGGTCTTTGCTTGAACCTGCCTGTCCAGTACCACCAAGTGTTCAGCCACAAACCAGCAAGAACAGCAGA
 TCCAGGTTTCAGCAGCCGACGAGGTTCCAGTCCAGGTGCAGGTACAGCAGTCTCCGCAACAGGTTCTCGGC
 TCAGCTCTCCCCACAACCTACCGTTCCACAGCCTACTGAGCAACCCATCCAGGTTCCAGGTGCAGATCCAA
 GGCCAGGCACCACAGTACGACAGCCCTCCATTACAGCCCGTCTCTGCAGAGTCCAGTCCCTCGCAGC
 TGCAAGCAGCTCAGATCCAGGTGCAGCAGTGAAGCAGCCAGCAGATCCAGGTCGAGAAATCCCGGA
 GGAGCACATCCCACATCAGCAAATCCAGGCTCAGCTGGTGGCTGGCCAGTCTTTGCTGGTGGTCAGCAG
 ATCCAAATCCAGACCGTGGGTGCCCTTTCCCCACCACCATCCAGCAGGGCTCACCCCGGAAGGGGAGC
 GGCGGGTTGGCACGGCCAGTGTCTCCAACCAAGTGAAGAAGCGCAAAGTGGACATGCCCATCACTGTGTC
 CTACGCCATCTCAGGGCAGCCGGTGGCCACCGTGTGGCCATTCCACAGGGCCAGCAGCAGAGTTATGTG
 TCTTTGAGGCCAGACTTACTGACAGTAGACAGTGGCCACCTGTACAGTGGCACTGGGACCATTACTAGCC
 CTACAGGAGAACTGGACCATCCCTGTTTATTCTGCCAGCCCCGGGGGACCCCTCAGCAGCAGAGCAT
 TACCCACATTGCCATCCCCAGGAAGCCTACAACGCAGTTCACGTCAAGTGGCTCACCCACAGCCCTGGCA
 GCTGTTAAGCTGGAGGATGACAAGGAGAAGATGGTGGCCACCACATCTGTAGTAAAACTCCCATGAAG
 AGCTGTGCAGACCCTTGCAAACCTCTCTTTCCAGCACAGTTCATGAATGGCAACATCCACATCCAGT
 GGCTGTGCAGGCTGTGGCAGGCACGTACCAGAATACGGCTCAAACCTGTCCATATATGGGACCCCAACAG
 CAGCCGCAGCAGCAAACCTCCCCAGGAACAGACACCACCACCACAGCAGCAGCAGCAACTCCAAGTTA
 CTTGTTCACTCAAACCTGTCAGGTTGCTGAAGTTGAACCACAGTACAGCCACAGCCTTCCCCAGAACT
 TCTGCTTCAAATTTCTTTGAAGCCAGAAGAAGGGCTTGAAGTATGGAAAACTGGGCCAGACCAAGAAT
 GCTGAAGTAGAGAAGGATGCTCAGAACAGATTGGCACCCATTGGGAGGCGCCAAGTGTGCGATTCCAGG
 AAGATCTCATCTCTGCTGTGGCAGAGTTGAATTATGGGCTCTGTCTAATGACACGGGAAGCTCGAAA
 TGGAGAAGGTGAACCCTATGACCCAGATGTGCTCTACTATATTTTCTGTGTATTCAAAAGTATCTTTTT
 GAAAATGGAAGGGTAGATGACATTTTCTCCGATCTTTATTATGTTTCGGTTCACGGAGTGGCTACATGAAG
 TTCTGAAGGATGTTACAGCCCGGTCACCTCCACTTGGCTATGTCTTGCCAGCCAGTACTGAGGAGAT
 GCTATGGGAGTGAAGCAGCTTGGGGCTCACTCCCCCTCCACCTTGTGACCACCCTCATGTTCTTTAAT
 ACCAAGTACTTCTATTGAAGACAGTGGACCAGCAGATGAAGCTGGCCTTCTCCAAGGCTTGTGCGACAGA
 CAAAGAAGAACCCTCTAATCCCAAGGATAAAAGCAGCAGATATCCGGTACTTGAAGGCCCTTGGAAATACA
 CCAGACTGGCCAGAAAGTTACAGATGACATGTATGCAGAACAGACGGAAAATCCAGAGAATCCATTGAGA
 TGTCCCATCAAGCTCTATGATTTCTACCTTTCAAATGCCCCAGAGTGTGAAAGGCCGGAATGACACCT
 TTTACCTGACACCTGAGCCAGTGGTGGCCCCAACAGCCCAATCTGGTACTCAGTCCAGCCTATCAGCAG
 AGAGCAGATGGGACAAATGCTGACGCGGATCCTGGTGATAAGAGAAATTCAGGAGGCCATCGCAGTGGCC
 AATGCAAGCACTATGCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Cloning Scheme:


ACCN: NM_198880

ORF Size: 2328 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.

RefSeq: [NM_198880.3](#)

RefSeq Size: 3271 bp

RefSeq ORF: 2331 bp

Locus ID: 54870

UniProt ID: [Q2TAL8](#)

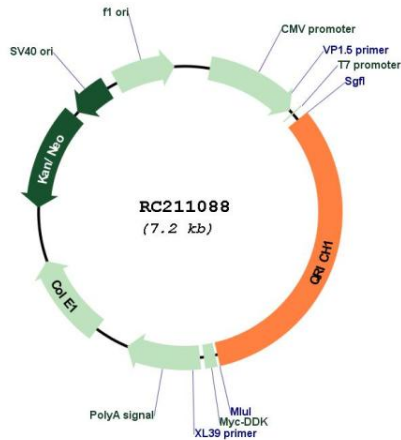
Cytogenetics: 3p21.31

Protein Families: Druggable Genome

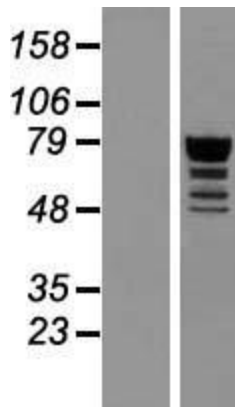
MW: 86.4 kDa

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) which is an ER-stress response pathway (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 (PubMed:33384352). May cooperate with ATF4 transcription factor signaling to regulate ER homeostasis which is critical for cell viability (PubMed:33384352). 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 RC211088



Western blot validation of overexpression lysate (Cat# [LY413582]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC213114] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).