

## Product datasheet for **RC222418**

### **C9orf72 (NM\_145005) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** C9orf72 (NM\_145005) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** C9orf72  
**Synonyms:** ALSFTD; DENND9; DENNL72; FTDALS; FTDALS1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC222418 representing NM\_145005  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCGACTCTTTGCCACCGCCATCTCCAGCTGTTGCCAAGACAGAGATTGCTTTAAGTGGCAAATCAC  
CTTTATTAGCAGTACTTTTGCTTACTGGGACAATATTCTTGGTCTAGAGTAAGGCACATTTGGGCTCC  
AAAGACAGAACAGGTACTTCTCAGTGATGGAGAAATAACTTTTCTTGCCAACCACACTCTAAATGGAGAA  
ATCCTTCGAAATGCAGAGAGTGGTGCTATAGATGTAAGTTTTTGTCTGTCTGAAAAGGGAGTGATTA  
TTGTTTCATTAATCTTTGATGGAAGCTGGAATGGGGATCGCAGCACATATGGACTATCAATTATACTTCC  
ACAGACAGAACTTAGTTTCTACCTCCACTTCATAGAGTGTGTGGATAGATTAAACACATATAATCCGG  
AAAGGAAGAATATGGATGCATAAGGAAAGACAAGAAAATGCCAGAAGATTATCTTAGAAGGCACAGAGA  
GAATGGAAGATCAGGGTCAGAGTATTATCCAATGCTTACTGGAGAAGTGATTCTCTGTAATGGAAGTCT  
TTCATCTATGAAATCACACAGTGTCTCTGAAGAAATAGATATAGCTGATACAGTACTCAATGATGATGAT  
ATTGGTGACAGCTGTCATGAAGGCTTTCTTCTCAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC222418 representing NM\_145005  
Red=Cloning site Green=Tags(s)

MSTLCPPSPAVAKTEIALSGKSPLLAATFAYWDNILGPRVRHIWAPKTEQVLLSDGEITFLANHTLNGE  
 ILRNAESGAIDVKFFVLSEKGVIIIVSLIFDGNWNGDRSTYGLSIIILPQTELSFYLP LHRVCVDR LTHIIR  
 KGRIWMHKERQENVQKIILEGTERMEDQGSIIIPMLTGEVIPVMELLSSMKSHSVPEEIDIADTVLNDDD  
 IGDSCHEGFLLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_145005

**ORF Size:** 666 bp

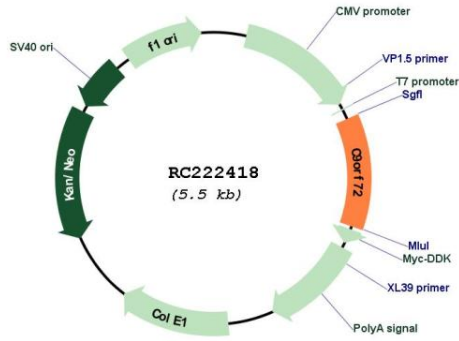
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

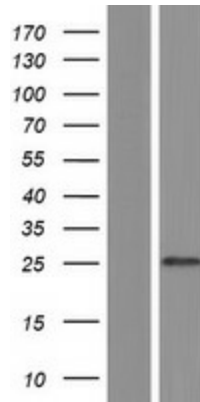
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_145005.6</a>
<b>RefSeq Size:</b>	1882 bp
<b>RefSeq ORF:</b>	669 bp
<b>Locus ID:</b>	203228
<b>UniProt ID:</b>	<a href="#">Q96LT7</a>
<b>Cytogenetics:</b>	9p21.2
<b>MW:</b>	24.6 kDa
<b>Gene Summary:</b>	The protein encoded by this gene plays an important role in the regulation of endosomal trafficking, and has been shown to interact with Rab proteins that are involved in autophagy and endocytic transport. Expansion of a GGGGCC repeat from 2-22 copies to 700-1600 copies in the intronic sequence between alternate 5' exons in transcripts from this gene is associated with 9p-linked ALS (amyotrophic lateral sclerosis) and FTD (frontotemporal dementia) (PMID: 21944778, 21944779). Studies suggest that hexanucleotide expansions could result in the selective stabilization of repeat-containing pre-mRNA, and the accumulation of insoluble dipeptide repeat protein aggregates that could be pathogenic in FTD-ALS patients (PMID: 23393093). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RC222418



Western blot validation of overexpression lysate (Cat# [LY408142]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222418 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).