

Product datasheet for **RG230222**

FUS (NM_001170937) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FUS (NM_001170937) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	FUS
Synonyms:	ALS6; altFUS; ETM4; FUS1; HNRNPP2; POMP75; TLS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG230222 ORF sequence, **codon optimized**.
 Due to the complexity of NM_001170937, the ORF clone is codon optimized for mammalian Expression.
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**GCGATCGCC**

ATGGCCAGCAATGACTATACGCAGCAGGCCACCCAATCCTACGGCGCCTACCCAACCTCAGCCCGGTGAGGTTACTCCAGCAGTCTCCCAACCATACGCAGCAGAGCTATAGTGGATATAGCCAAAGCACGGATACATCTGGGTATGGCCAGTCATCATACAGCAGTTACGGGCAATCACAGAACCACCGGTACGGAACGCAGATACCCACAGGGTTACGGATCTACAGGCGCTATGGCTCTAGCCAGTCATCCCAAAGTAGCTATGGGCAGCAGAGCTTACCCGGGGTACGGGAGCAGCCTGCCCGAGTTCAACCAGCGGATCCTACGGCTCTCCAGCCAGTCTTAGCTACGGCCAGCCAGTCCGGCTCCTACTCTCAGCAGCCTTCTATGGCGGTACAGCAGTGCATACCGCCAGCAGCAAAGTTATAACCCACCACAAGGTTACGGACAGCAGAACCAGTATAATTCTTCTCAGGGGGAGGGGGCGCGGGAATTACGGACAGGACCAGAGCTCCATGTCTAGCGGGGGGGCTCGCGCGGATATGGCAATCAGGATCAGTCCGGGGCGGAGGGAGCGGTGGATATGGCCAGCAGGACAGGGGGCGCGCGGAGAGGGCGGAGCGGAGGGAGGGGGAGGGGGGATACAACCGGAGCAGTGGCGGTTATGAGCCTCGCGGTGAGGGGGAGGGAGAGGGGGAGGGGGAGGGGGGATACAACCGGAGCAGTGGCGTTTTAACAAAGTTTGAGGGCCACGGGACCAAGGCAGCAGACATGATTCCGAGCAAGATAACTCCGACAACAACCAATTTTCGTCGAAGCCCTTGAGAGAGAACGTCACAATCGAAAGCGTGGCCGATTACTTTAAGCAGATTGGAATAATCAAAACAACAAAAGACCGCCAACTATGATTAACCTGTACACCGACCGCAAAACAGGCAAGCTTAAGGGAGAGGCAACCGTCAGTTTTGATGATCCACCCAGCGCCAAAGCGGCCATTGATTGGTTCGATGGCAAGGAGTTCTCTGGCAATCCCATTAAAGTAAGCTTTGCAACGAGGCGCGCTGATTTCAATAGAGCGGGGGAAATGGTCGCGGAGGGCGCGGACGAGGAGGACCAATGGGGCGGGGGTTACGGCGGGGGGGGAGCGGTGGCGGTGGGAGGGGGGGTCCCTAGCGGGGAGGGGGTGGTGGGGTTCAGCAGAGGGCTGGGACTGAAATGTCCCAACCCACTTGTGAGAATATGAACCTCAGCTGGCGAAATGAATGCAACCAGTGCAAGGCGCCGAAACCTGATGGACCTGGTGGGGACCAGGGGCTCACACATGGCGGCAATTACGGGATGACCGAAGGGGGCGCGCGGCTATGATAGAGGCGGCTACCGCGGGCGGGAGGTGACAGGGGTGGGTTCCGCGGGGGAGGGGTGGCGGTGATAGGGAGGCTTCGGTCTGGCAAGATGGATTCCAGAGGCGAACACAGGCAGGACAGGAGGGAGAGGCCCTAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG230222 representing NM_001170937
 Red=Cloning site Green=Tags(s)

MASNDYTQQATQSYGAYPTQPGQYSSQSSQPYGQQSYSGYSQSTDTSGYQSSYSSYQSQNTGYGTQS
 TPQGYGSTGGYSSQSSSYGQQSSYPGYQQPAPSSTSGSYGSSQSSSYGQPQSGYSQQPSYGGQQ
 QSYGQQQSYNPPQGYGQQNQYNSSSGGGGGNYGQDQSSMSSGGGSGGYGNQDQSGGGGSGGYGQDRG
 GRGRGGSGGGGGGGGYNRSSGGYEPRGRGGRRGGRGGMGSDRGGFNKFGGPRDQGSRHSEQDNSDN
 NTIFVQGLGENVTIESVADYFKQIGI IKTNKKTGQPMINLYTDRETGKLGKGEATVSFDDPPSAKAAIDWF
 DGKEFSGNPIKVSFATTRADFNRGGNGRGRGGRGPMGRGGYGGGGSGGGRRGGFPSSGGGGGGQQRAG
 DWKCPNPTCENMNF SWRNECNQCKAPKPDGPGGGPGGSHMGNYGDDRRGRRGGYDRGGYRGRGGDRGGF
 RGGRRGGDRGGFGPKMDSRGEHRQDRRERPY

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

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:	<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_001170937.1 , NP_001164408.1
RefSeq Size:	5107 bp
RefSeq ORF:	1569 bp
Locus ID:	2521
Cytogenetics:	16p11.2
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Gene Summary:	This gene encodes a multifunctional protein component of the heterogeneous nuclear ribonucleoprotein (hnRNP) complex. The hnRNP complex is involved in pre-mRNA splicing and the export of fully processed mRNA to the cytoplasm. This protein belongs to the FET family of RNA-binding proteins which have been implicated in cellular processes that include regulation of gene expression, maintenance of genomic integrity and mRNA/microRNA processing. Alternative splicing results in multiple transcript variants. Defects in this gene result in amyotrophic lateral sclerosis type 6. [provided by RefSeq, Sep 2009]