

## Product datasheet for **RG224735**

### **NRG3 (NM\_001010848) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NRG3 (NM_001010848) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NRG3
Synonyms:	HRG3; pro-NRG3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224735 representing NM\_001010848  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGAGTGAAGGGGCGCCGCTGCCTCGCCACCTGGTGCCGCTTCGGCAGCCGCCCTCGGCCGAGGAGG  
 GCACCGCGCGGCTGCGGCGGGCAGCGCGGGCGGGGCCGACGGCGGCGGAAGGGGCGGCCGA  
 GCCCCCCCGGAGTTACGCTGTAGCGACTGCATCGTGTGGAACCGGCAGCAGACGTGGCTGTGCGTGGTA  
 CCTCTGTTTCATCGGCTTCATCGGCTGGGGCTCAGCCTCATGTTCTCAAATGGATCGTGGTGGGCTCCG  
 TCAAGGAGTACGTGCCACCGACCTAGTGGACTCCAAGGGGATGGGCCAGGACCCCTTCTCCTCTCAA  
 GCCAGCTCTTTCCCAAGGCCATGGAGACCACCACCCTACCCTTCCACCACGTCCCCGCCACCCCC  
 TCCGCCGGGGTCCGCCTCCTCAGGACGCCAACCAGGATTAGCACTCGCTGACCACCATCACGGGG  
 CGCCACTCGCTCCCCGGGCACCGGTGCCATCCGGGCCAGCCCGCTCCACCACAGCACGGAACAC  
 TGGGCCCTCGCACGGTCCCGTCCACCACGGCCCGTTCTTTCAGTAGCAGCAGCTGGGCTCCGACCC  
 CCGGTGCCAGGAATCCAAGTACCCAGGCAATGCCCTCCTGGCCTACTGCGGCATACGCTACCTCCTCCT  
 ACCTTCACGATTCTACTCCCTCCTGGACCTGTCTCCCTTTCAGGATGCTGCCTCCTCTTCTCCTCTTC  
 TTCTCCTCCGCTACCACCACCACAGAAACTAGCACCAGCCCCAAATTTTCATACGACGACATATTCC  
 ACAGAGCGATCCGAGCACTTCAAACCTGCCGAGACAAGGACCTTGCACTACTGTCTCAATGATGGCGAGT  
 GCTTTGTGATCGAAACCTGACCGGATCCCATAAACACTGTCGGTGCAAAGAAGGCTACCAAGGAGTCCG  
 TTGTGATCAATTTCTGCCGAAACTGATTCATCTTATCGGATCCAACAGACCACTTGGGGATTGAATTC  
 ATGGAGAGTGAAGAAGTTTATCAAAGGCAGGTGCTGTCAATTTTCATGTATCATCTTTGGAATTGCATCG  
 TGGGCATGTTCTGTGCAGCATTCTACTTCAAAGCAAGAACAAGCTAAACAAATCCAAGAGCAGCTGAA  
 AGTGCCACAAAATGGTAAAAGCTACAGTCTCAAAGCATCCAGCACAATGGCAAAGTCAGAGAATTGGTG  
 AAGAGCCATGTCCAGCTGCAAAATTATTCAAAGGTGAAAAGGCATCCTGTGACTGCATTGGAGAAAATGA  
 TGGAGTCAAGTTTGTCCGCCCCAGTCAATCCCTGAGGTCCCTTCTCCTGACAGAGGAAGCCAGTCTGT  
 CAAACACCACAGGAGTCTATCCTCTTGCTGCAGCCAGGGCAAAGAAGTGGCATGCTCCATAGGAATGCC  
 TTCAGAAGGACACCCCGTACCCCGAAGTAGGCTAGGTGGAATTGTGGGACCAGCATATCAGCAACTCG  
 AAGAATCAAGGATCCCAGACCAGGATACGATACCTTGCCAAGGTATTTCATCCAGTGGTTTAAAAACCA  
 ACGAAATACATCAATAAATATGCAACTGCCTTCAAGAGAGACAAACCCCTATTTTAAAGCTTGGAGCAA  
 AAGGACCTGGTGGCTATTCATCCACAAGGGCAGTTCTGTGCCATCATCCCTTCAGTGGGTTTAGAGG  
 AAACCTGCCTGCAATGCCAGGGATTTCTGAAGTCAAAGCATCAAATGGTGCAAAAACCTCTATTACAGC  
 TGACGTTGTCAATGTGAGTATTCCAGTCAGCGATTGTCTTATAGCAGAACAACAAGAAGTAAAAATTG  
 CTAGAACTGTCCAGGAGCAGATCCGAATTCTGACTGATGCCAGACGGTCAGAAGACTACGAACTGGCCA  
 CGGTAGAAACCGAGGACAGTGAAGCGAAAACACAGCCTTTCTCCCCCTGAGTCCCACAGCCAAATCAGA  
 ACGAGAGGCGCAATTTGTCTTAAGAAATGAAATACAAAGAGACTCTGCATTGACCAAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG224735 representing NM\_001010848  
 Red=Cloning site Green=Tags(s)

MSEGAAAASPPGAASAAAASAEEGTAAAAAAAAGGGPDGGGEGAAEPPRELRCSDCIVWNRQQTWLCVV  
 PLFIGFIGLGLSLMLLKWIVVGSVKEYVPTDLVDSKGMGQDPFFLSKPSSFPKAMETTTTTTTSTTSPATP  
 SAGGAASSRTPNRISTRLLTITRAPTRFPGHRVPIRASPRSTTARNTAAPATVPSTTAPFFSSSTLGSRP  
 PVPGTPSTQAMPSPWPTAAYATSSYLHDSTPSWTLSPFQDAASSSSSSSSSATTTPETSTSPKFHTTYS  
 TERSEHFKPCRDKDLAYCLNDGECFVIETLTGSHKHCRCKEGYQGVRCDFLPKTDSILSDPTDHLGIEF  
 MESEEVYQRQVLSISCIIFGIVIVGMFCAAFYFKSKKQAKQIQEQLKVPQNGKSYSLKASSTMAKSENLV  
 KSHVQLQNYSKVERHPVTALEKMMESSFVGPQSFPEVPSDRGSQSVKHHRSLSSCCSPGQRSGMLHRNA  
 FRRTPPSPRSLGGIVGPAYQQLLEESRIPDQDTIPCQGYSSGLKTRNTSINMQLPSRETNPFYNSLEQ  
 KDLVGYSSTRASSVPIIPSVGLEETCLQMPGISEVKSIIKWCKNSYSADVNVNIPVSDCLIAEQVEVKIL  
 LETVQEIRILTDARSEDYELASVETEDSASENTAFLPLSPTAKSERAQFVLRNEIQRDSALTK

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001010848

**ORF Size:** 2088 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.

**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\\_001010848.4](#)

**RefSeq Size:** 3692 bp

**RefSeq ORF:** 2091 bp

**Locus ID:** 10718

**UniProt ID:** [P56975](#)

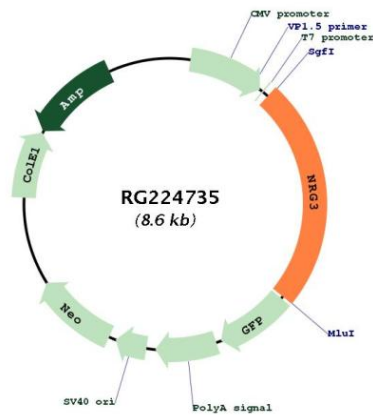
**Cytogenetics:** 10q23.1

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** ErbB signaling pathway

**Gene Summary:**

This gene is a member of the neuregulin gene family. This gene family encodes ligands for the transmembrane tyrosine kinase receptors ERBB3 and ERBB4 - members of the epidermal growth factor receptor family. Ligand binding activates intracellular signaling cascades and the induction of cellular responses including proliferation, migration, differentiation, and survival or apoptosis. This gene encodes neuregulin 3 (NRG3). NRG3 has been shown to activate the tyrosine phosphorylation of its cognate receptor, ERBB4, and is thought to influence neuroblast proliferation, migration and differentiation by signalling through ERBB4. NRG3 also promotes mammary differentiation during embryogenesis. Linkage studies have implicated this gene as a susceptibility locus for schizophrenia and schizoaffective disorder. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional transcript variants have been described but their biological validity has not been verified.[provided by RefSeq, Sep 2009]

**Product images:**


Circular map for RG224735