

## Product datasheet for **RG211302**

### **NODAL (NM\_018055) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** NODAL (NM\_018055) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** NODAL  
**Synonyms:** HTX5  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG211302 representing NM\_018055  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCACGCCCACTGCCTGCCCTTCTTCTGCACGCCTGGTGGGCCCTACTCCAGGCGGGTCTGCGACGG  
TGGCCACTGCGCTCCTGCGTACGCGGGGGCAGCCCTCGTCGCCATCCCCTCTGGCGTACATGCTGAGCCT  
CTACCGCGACCCGCTGCCGAGGGCAGACATCATCCGCAGCCTACAGGCAGAAGATGTGGCAGTGGATGGG  
CAGAACTGGACGTTTGGCTTTGACTTCTCCTTCTGAGCCAACAAGAGGATCTGGCATGGGCTGAGCTCC  
GGCTGCAGCTGTCCAGCCCTGTGGACCTCCCACTGAGGGCTCACTTGCCATTGAGATTTCCACCAGCC  
AAAGCCCAGACAGAGCAGGCTTCAGACAGCTGCTTAGAGCGGTTTCAGATGGACCTATTACTGTCACT  
TTGTCCCAGGTACCTTTTCTTGGGCAGCATGGTTTTGGAGGTGACCAGGCCTCTCTCCAAGTGGCTGA  
AGCGCCCTGGGGCCCTGGAGAAGCAGATGTCCAGGGTAGCTGGAGAGTGTGGCCGCGGCCCCACACC  
GCCTGCCACCAATGTGCTCCTTATGCTCTACTCCAACCTCTCGCAGGAGCAGAGGCGAGCTGGGTGGGTCC  
ACCTTGCTGTGGGAAGCCGAGAGCTCCTGGCGGGCCAGGAGGGCAGCTGTCTGGGAGTGGGGCAAGA  
GGCACCCTCGACATCACTTGCCAGACAGAAGTCAACTGTGTCGGAAGGTCAAGTTCAGGTGGACTTCAA  
CCTGATCGGATGGGGCTCCTGGATCATCTACCCCAAGCAGTACAACGCCATCGCTGTGAGGGCAGTGT  
CCTAATCTGTTGGGGAGGAGTTTCATCCGACCAACCATGCATACATCCAGAGTCTGCTGAAACGTTACC  
AGCCCACCGAGTCCCTTCCACTTGTGTGCCCAAGTGAAGACCAAGCCGCTGAGCATGCTGTATGTGGA  
TAATGGCAGAGTGCTCCTAGATCACCATAAAGACATGATCGTGGGAAGTGTGGGTGCCTC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA



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**Protein Sequence:** >RG211302 representing NM\_018055  
 Red=Cloning site Green=Tags(s)

MHAHCLPFLHAWWALLQAGAATVATALLRTRGQPSSPSPLAYMLSLYRDPLPRADIIRSLQAEDVAVDG  
 QNWTFAFDLSFLSQQEDLAWAELRLQLSSPVDLPTTEGSLAIEIFHQPKPDTEQASDSCLERFQMDLFTVT  
 LSQVTFSLGSMVLEVTRPLSKWLKRPGALEKQMSRVAGECWPRPPTPPATNVLLMLYSNLSEQRQLGGS  
 TLLWEAESSWRAQEQQLSWEWGRHRRHLLPDRSQLCRKVKFQVDFNLIGWGSWIIYPKQYNAYRCEGEC  
 PNPVGEFFHPTNHAYIQSLLKRYQPHRVPSTCCAPVKTKPLSMLYVDNGRVLLDHHKDMI VEECGCL

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_018055

**ORF Size:** 1041 bp

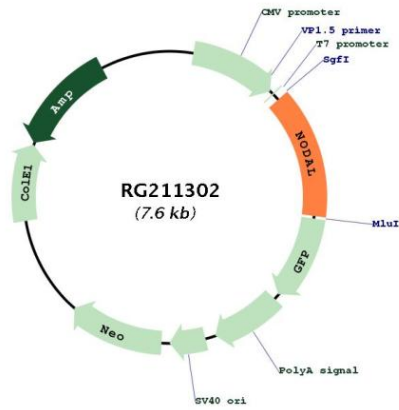
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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>	<u>NM_018055.3, NP_060525.2</u>
<b>RefSeq Size:</b>	1744 bp
<b>RefSeq ORF:</b>	1044 bp
<b>Locus ID:</b>	4838
<b>UniProt ID:</b>	<u>Q96S42</u>
<b>Cytogenetics:</b>	10q22.1
<b>Protein Families:</b>	Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Induced pluripotent stem cells, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway
<b>Protein Pathways:</b>	TGF-beta signaling pathway
<b>Gene Summary:</b>	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate the mature protein, which regulates early embryonic development. This protein is required for maintenance of human embryonic stem cell pluripotency and may play a role in human placental development. Mutations in this gene are associated with heterotaxy, a condition characterized by random orientation of visceral organs with respect to the left-right axis. [provided by RefSeq, Aug 2016]

Product images:



Circular map for RG211302