

Product datasheet for RC211302

NODAL (NM_018055) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NODAL (NM_018055) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NODAL
Synonyms:	HTX5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211302 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCACGCCCACTGCCTGCCCTTCTTCTGCACGCCTGGTGGGCCCTACTCCAGGCGGGTCTGCGACGG
TGGCCACTGCGCTCTGCGTACGCGGGGGCAGCCCTCGTCGCCATCCCCTCTGGCGTACATGCTGAGCCT
CTACCGCGACCCGCTGCCGAGGGCAGACATCATCCGCAGCCTACAGGCAGAAGATGTGGCAGTGGATGGG
CAGAACTGGACGTTTGGCTTTGACTTCTCCTTCTGAGCCAACAAGAGGATCTGGCATGGGCTGAGCTCC
GGCTGCAGCTGTCCAGCCCTGTGGACCTCCCCTGAGGGCTCACTTGCCATTGAGATTTCCACCAGCC
AAAGCCCAGACAGAGCAGGCTTCAGACAGCTGCTTAGAGCGGTTTCAGATGGACCTATTCACTGTCACT
TTGTCCCAGGTCACCTTTTCTTGGGCAGCATGGTTTTGGAGGTGACCAGGCCTCTCTCCAAGTGGCTGA
AGCGCCCTGGGGCCCTGGAGAAGCAGATGTCCAGGGTAGCTGGAGAGTGTGGCCGCGGCCCCACACC
GCCTGCCACCAATGTGCTCCTTATGCTCTACTCCAACCTCTCGCAGGAGCAGAGGCGAGCTGGGTGGGTCC
ACCTTGTGTGGGAAGCCGAGAGCTCCTGGCGGGCCAGGAGGGACAGCTGTCTGGGAGTGGGGCAAGA
GGCACCCTCGACATCACTTGCCAGACAGAAGTCAACTGTGTGGGAAGGTCAAGTTCAGGTGGACTTCAA
CCTAATCCTGTTGGGGAGGAGTTTCATCCGACCAACCATGCATACATCCAGAGTCTGCTGAAACGTTACC
AGCCCCACCGAGTCCCTTCCACTTGTGTGCCCCAGTGAAGACCAAGCCGCTGAGCATGCTGTATGTGGA
TAATGGCAGAGTGCTCCTAGATCACCATAAAGACATGATCGTGGGAAGTGTGGGTGCCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC211302 protein sequence
Red=Cloning site Green=Tags(s)

MHAHCLPFLHAWWALLQAGAATVATALLRTRGQPSSPSPLAYMLSLYRDPLPRADIIRSLQAEDVAVDG
 QNWTFAFDFFSFLSQQEDLAWAELRLQLSSPVDLPTEGSLAIEIFHQPKPDTEQASDSCLERFQMDLFTVT
 LSQVTFSLGSMVLEVTRPLSKWLKRPGALEKQMSRVAGECWPRPPTPPATNVLLMLYSNLSEQRQLGGS
 TLLWEAESSWRAQEQQLSWEWGRHRRHLLPDRSQLCRKVKFQVDFNLIGWGSWIIYPKQYNAYRCEGEC
 PNPVGEFFHPTNHAYIQSLLKRYQPHRVSTCCAPVKTPLSMLYVDNGRVLLDHHKDMIIVECGCL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6010_e08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_018055

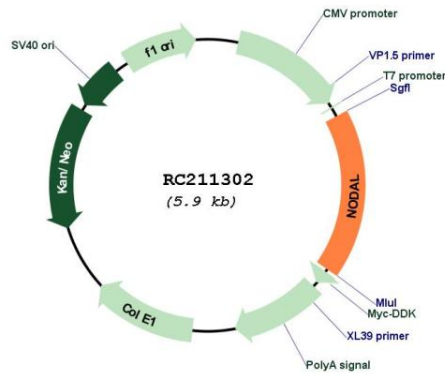
ORF Size: 1041 bp

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 or by calling 301.340.3188 option 3 for pricing and delivery.

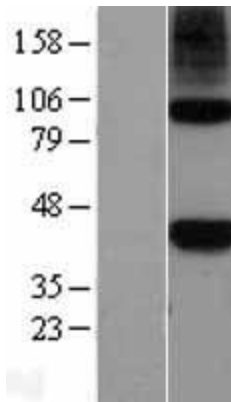
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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:	<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_018055.3 , NP_060525.2
RefSeq Size:	2086 bp
RefSeq ORF:	1044 bp
Locus ID:	4838
UniProt ID:	Q96S42
Cytogenetics:	10q22.1
Protein Families:	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
Protein Pathways:	TGF-beta signaling pathway
MW:	39.6 kDa
Gene Summary:	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 RC211302



Western blot validation of overexpression lysate (Cat# [LY402640]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211302 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).