

Product datasheet for **RG238506**

RUNX2 (NM_001278478) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RUNX2 (NM_001278478) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RUNX2
Synonyms:	AML3; CBF-alpha-1; CBFA1; CCD; CCD1; CLCD; OSF-2; OSF2; PEA2aA; PEBP2aA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG238506 representing NM_001278478.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCGTATTCCCCGTAGATCCGAGCACCAGCCGGCGCTTCAGCCCCCTCCAGCAGCCTGCAGCCGGC
AAATGAGCGACGTGAGCCCGTGGTGGCTGCGCAACAGCAGCAGCAACAGCAGCAGCAACAGCAG
CAGCAGCAGCAGCAACAGCAGCAGCAGCAGCAGGAGGCGGCGGGCGGCTGCGGCGGCGGCGGCT
GCGGCGGCGGCGACTGCAGTGCCCGGTTGCGGCCGCCACGACAACCGCACCATTGGTGGAGATCATC
GCCGACCACCGGCCAACTCGTCCGACCCAGCCCAACTTCTGTGCTCGGTGCTGCCCTCGCAC
TGGCGTGCAACAAGACCCTGCCCGTGGCTTCAAGGTGGTAGCCCTCGGAGAGGTACCAGATGGGACT
GTGGTTACTGTATGGCGGTAACGATGAAATATTCTGCTGAGCTCCGGAATGCCTCTGCTGTTATG
AAAAACCAAGTAGCAAGTTCAACGATCTGAGATTTGTGGCCGGAGTGGACGAGGAAGATTTACC
TTGACCATAACCGTCTTCAAAATCCTCCCAAGTAGCTACCTATCACAGAGCAATTAAGTTACAGTA
GATGGACCTCGGAACCCAGAAGCACAGACAGAAGCTTGATGACTCTAAACCTAGTTTGTCTCTGAC
CGCTCAGTGATTTAGGGCGCATTCTCATCCAGTATGAGAGTAGGTGTCCCGCTCAGAACCCACGG
CCCTCCCTGAACCTGCACCAAGTCCTTTAATCCACAAGGACAGAGTCAGATTACAGACCCAGGCAG
GCACAGTCTTCCCGCCGTGGTCTATGACCAGTCTTACCCTCTACCTGAGCCAGATGACGTCCCGG
TCCATCCACTCTACCACCCCGCTGTCTTCCACACGGGGCACTGGGCTTCTGCCATCACCAGTGTGCT
AGGCGCATTTCAGGTGCTTCAAGTGGGCCCTTTTTCAGACCCAGGCAGTTCCCAAGCATTTCATCC
CTACTGAGAGCCGCTTCTCAACCCACGAATGCACTATCCAGCCACCTTACTTACACCCCGCCAGTC
ACCTCAGGCATGTCCCTCGGTATGTCCGCCACCACTACTACCACACCTACCTGCCACCACCTACCCG
GGCTCTTCCAAAGCCAGAGTGGACCTTCCAGACCAGCAGCACTCCATATCTCTACTATGGCATTCTG
TCAGGATCCTATCAGTTTCCCATGGTGGCGGGGAGACCGGTCTCCTTCCAGAATGCTTCCGCCATGC
ACCACCACCTCGAATGGCAGCACGCTATTAATCCAAATTTGCCTAACCGAATGATGGTGTGACGCT
GATGGAAGCCACAGCAGTCCCAACTGTTTTGAATTCTAGTGGCAGAATGGATGAATCTGTTTGCGCA
CCATAT
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTAAAC
```

Protein Sequence:

>Peptide sequence encoded by RG238506
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MRIPVDPSTRRFSPPSSSLQPGKMSDVSPVVAQQQQQQQQQQQQQQQQQQQEEAAAAAAAAA
AAAAAAVPRLRPPHDNRTMVEIIADHPAELVRTDSPNFLCSVLPSHWRCNKTLPVAFKVVVALGEVPDGT
VVTVMAGNDENYSaelRNASAVMKNQVARFNDLRFVGRSGRGKSFTLITIVFTNPPQVATYHRAIKVTV
DGPREPRRHRQKLDSKPSLFSDRLSDLGRIPHSMRVGVPPQNPRPSLNSAPSPFNPQGSQITDPRQ
AQSSPPSYDQSYPSYLSQMTSPSIHSTTPLSSTRGTGLPAITDVPRRISGASELGPFSDRPQFPSISS
LTESRFSNPRMYPATFTYTPPVTSGMSLGMSATTHYHTYLPPPYPGSSQSQSGPFQTSSTPYLYGTS
SGSYQPFMVPGGDRSPSRMLPPCTTTSNGSTLLNPLNPNQNDGVDADGSHSSSPTVLNSSGRMDESVWR
PY
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYTNRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

Restriction Sites:

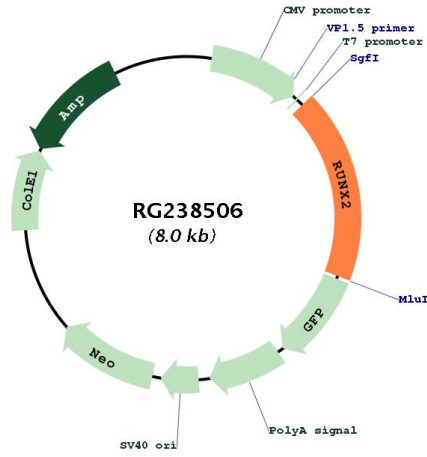
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001278478

ORF Size: 1455 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).

RefSeq: [NM_001278478.2](#)

RefSeq Size: 5235 bp

RefSeq ORF: 1458 bp

Locus ID: 860

Cytogenetics: 6p21.1

Protein Families: Druggable Genome, Transcription Factors

MW: 53.1 kDa

Gene Summary: This gene is a member of the RUNX family of transcription factors and encodes a nuclear protein with an Runt DNA-binding domain. This protein is essential for osteoblastic differentiation and skeletal morphogenesis and acts as a scaffold for nucleic acids and regulatory factors involved in skeletal gene expression. The protein can bind DNA both as a monomer or, with more affinity, as a subunit of a heterodimeric complex. Two regions of potential trinucleotide repeat expansions are present in the N-terminal region of the encoded protein, and these and other mutations in this gene have been associated with the bone development disorder cleidocranial dysplasia (CCD). Transcript variants that encode different protein isoforms result from the use of alternate promoters as well as alternate splicing. [provided by RefSeq, Jul 2016]