

Product datasheet for **RC212884**

RUNX2 (NM_001024630) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RUNX2 (NM_001024630) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RUNX2
Synonyms:	AML3; CBF-alpha-1; CBFA1; CCD; CCD1; CLCD; OSF-2; OSF2; PEA2aA; PEBP2aA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC212884 representing NM_001024630
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTTCATTGCGCTCACAACAACCACAGAACCACAAGTGGGTGCAAACCTTCTCCAGGAGGACAGCA
 AGAAGTCTCTGGTTTTAAATGGTTAATCTCCGCAGGTCACTACCAGCCACCGAGACCAACAGATCATT
 TAAGGCTGCAAGCAGTATTTACAACAGAGGGTACAAGTCTATCTGAAAAAAAAAGGAGGACTATGGCA
 TCAAACAGCCTCTTCAGCACAGTGACACCATGTGACAAAACTCTTTTGGGATCCGAGCACCAGCCGGC
 GCTTCAGCCCCCTCCAGCAGCCTGCAGCCCGCAAAATGAGCGACGTGAGCCCGGTGGTGGTGC
 ACAGCAGCAGCAACAGCAGCAGCAACAGCAGCAGCAGCAGCAACAGCAGCAGCAGCAGCAGGAG
 GCGGGCGGCGGCTGCGGGCGGCGGCGGCTGCGGGCGGCGCAGTGCAGTCCCCGGTTGCGGCCGC
 CCCACGACAACCGACCATGGTGGAGATCATCGCCGACCACCCGGCCGAACCTGTCGACCCGACAGCCC
 CAACTTCTGTGCTCGGTGCTGCCCTCGCACTGGCGCTGCAACAAGACCTGCCCGTGGCCTTCAAGGTG
 GTAGCCCTCGGAGAGTACCAGATGGGACTGTGGTTACTGTATGGCGGGTAACGATGAAAATTATCTG
 CTGAGCTCCGGAATGCCTCTGCTGTTATGAAAAACCAAGTAGCAAGTTCAACGATCTGAGATTTGTGGG
 CCGGAGTGGACGAGGCAAGATTTACCTTGACCATAACCGTCTTCAAAATCTCCCAAGTAGCTACC
 TATCACAGAGCAATTAAGTTACAGTAGATGGACCTCGGGAACCCAGAAGGCACAGACAGAAGCTTGATG
 ACTCTAAACCTAGTTTGTCTCTGACCGCCTCAGTGATTTAGGGCGCATTCTCATCCAGTATGAGAGT
 AGGTGTCCCGCTCAGAACCCACGGCCCTCCCTGAACTCTGCACCAAGTCCTTTTAAATCCACAAGGACAG
 AGTCAGATTACAGACCCAGGACGACAGTCTCCCGCCGTGGTCTATGACCAGTCTTACCCCTCT
 ACCTGAGCCAGATGACGTCCCCGTCCATCCACTCTACCACCCGCTGTCTTCCACACGGGCACTGGGCT
 TCCTGCCATCACCGATGTGCTTAGGCGCATTTCCAGATGATGACACTGCCACCTCTGACTTCTGCCTTGG
 CCTTCCACTCTCAGTAAGAAGAGCCAGGAGGTGCTTCAAACTGGGCCCTTTTTCAGACCCAGGCACT
 TCCCAAGCATTTTCCCTCACTGAGAGCCGCTTCTCCAACCCACGAATGCACTATCCAGCCACCTTTAC
 TTACACCCCGCCAGTACCTCAGGCATGTCCCTCGGTATGTCGCCACCACTCACTACCACCTACCTG
 CCACCACCTACCCGGCTTCTCCAAAGCCAGAGTGGACCTTCCAGACCAGCAGCACTCCATATCTCT
 ACTATGGCACTTCGTGAGGATCTATCAGTTCCCATGGTGCCGGGGGAGACCGGTCTCCTTCCAGAA
 TCTTCCGCATGCACCACCTCGAATGGCAGCAGCTATTAATCAAATTTGCCTAACAGAATGAT
 GGTGTTGACGCTGATGGAAGCCACAGCAGTTCCCAAGTGTGTTGAACTTCTAGTGCAGAATGGATGAAT
 CTGTTTGGCGACCATAT

ACGCGTACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC212884 representing NM_001024630
 Red=Cloning site Green=Tags(s)

MLHSPHKQPQNHKCGANFLQEDSKSLVFKWLISAGHYQPPRPTEFKAASSIYNRYKFYLKKKGGTMA
 SNSLSTVTPCQQNFWDPTSTRFSPSSSLQPGKMSDVSPVVAQQQQQQQQQQQQQQQQQQQQE
 AAAAAAAAAAAAAAAAAAVPRLRPPHDNRTMVEIIADHPAELVRTDSPNFLCSVLP SHWRCNKTLPVAFKV
 VALGEVPDGTVVVMAGNDENYSAELRNASAVMKNQVARFNDLRFVGRSGRGKSFLLITVFTNPPQVAT
 YHRAIKVTVDGPERRRHRQKLDDSKPSLFSRDLSDLGRIPHPSMRVGVPPQNRPRLNSAPSPFNPOGQ
 SQITDPRQAQSSPPWSYDQSYPSYLSQMTSPSIHSTTPLSSTRGTGLPAITDVPRRISDDDTATSDFLW
 PSTLSKKSQAGASELGPFSQPRQFPISSLTESRFSPNRMHPATFTYTPPVTSMSGLGMSATTHYHTYL
 PPPYPGSSQSQSGPFTSSTPYLYYGTSSGSYQFPMVPGDRSPSRMLPPCTTTNGSTLLNPNLPNQND
 GVDADGSHSSSPTVLNSSGRMDESVMWRPY

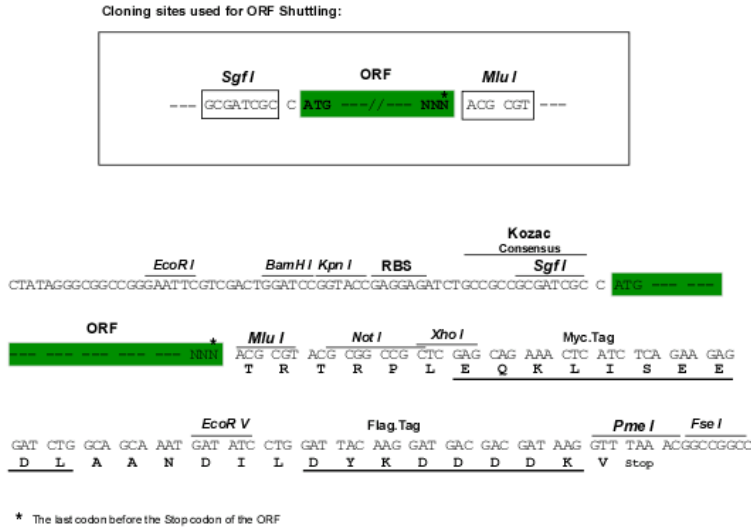
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg2598_e06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001024630

ORF Size: 1767 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.

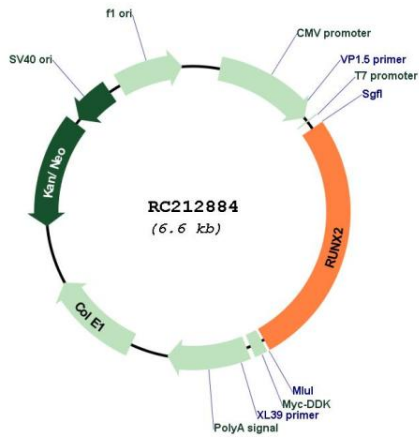
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.

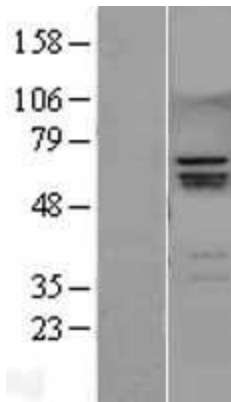
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_001024630.2</u> , <u>NP_001019801.2</u>
RefSeq Size:	5572 bp
RefSeq ORF:	1566 bp
Locus ID:	860
UniProt ID:	<u>Q13950</u>
Cytogenetics:	6p21.1
Protein Families:	Druggable Genome, Transcription Factors
MW:	64.44 kDa
Gene Summary:	<p>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]</p>

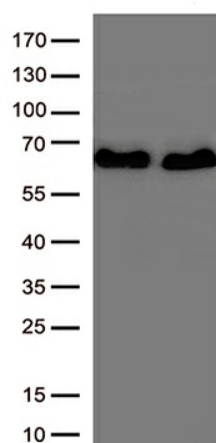
Product images:



Circular map for RC212884



Western blot validation of overexpression lysate (Cat# [LY400402]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212884 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the RUNX2 transcript variant 1 (Cat# RC212884, Left lane) or RUNX2 transcript variant 2 (Cat# [RC212936], Right lane) cDNA clone for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RUNX2 antibody(Cat# [TA813668]).