

Product datasheet for **RG208874**

Angiogenin (ANG) (NM_001145) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Angiogenin (ANG) (NM_001145) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: Angiogenin
Synonyms: ALS9; HEL168; RAA1; RNASE4; RNASE5
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG208874 representing NM_001145
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGTGATGGGCCTGGCGTTTTGTTGTTGGTCTTCGTGCTGGGTCTGGGTCTGACCCACCGACCCTGG
 CTCAGGATAACTCCAGGTACACACACTTCTGACCCAGCACTATGATGCCAAACCACAGGGCCGGGATGA
 CAGATACTGTGAAAGCATCATGAGGAGACGGGGCCTGACCTCACCTGCAAAGACATCAACACATTTATT
 CATGGCAACAAGCGCAGCATCAAGGCCATCTGTGAAAACAAGAATGGAACCCCTCACAGAGAAAACCTAA
 GAATAAGCAAGTCTTCTTCCAGGTCACCACTTGCAAGCTACATGGAGGTTCCCCTGGCCTCCATGCCA
 GTACCGAGCCACAGCGGGTTCAGAAACGTTGTTGCTTGTAATAATGGCTTACTGTCCACTGGAT
 CAGTCAATTTCCGTCGTCGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG208874 representing NM_001145
 Red=Cloning site Green=Tags(s)

MVMGLGVLLLVFVLGLGLTPPTLAQDNSRYTHFLTQHYDAKPQGRDDRYCESIMRRRGLTSPCKDINTFI
 HGNKRSIKAICENKNGNPHRENLRISKSSFQVTTCKLHGGSPWPPCQYRATAGFRNVVACENGLPVHLD
 QSIFRRP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI



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Cloning Scheme:


ACCN: NM_001145

ORF Size: 441 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:

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_001145.4](#)

RefSeq Size: 805 bp

RefSeq ORF: 444 bp

Locus ID: 283

UniProt ID: [P03950](#)

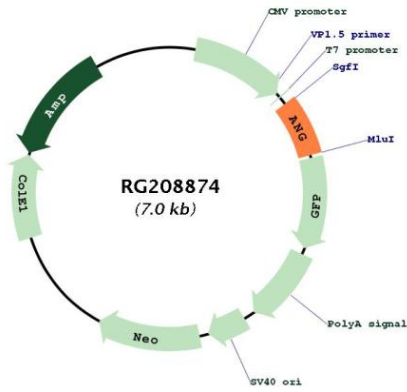
Cytogenetics: 14q11.2

Domains: RNase_Pc

Protein Families: Druggable Genome, Secreted Protein, Transmembrane

Gene Summary: The protein encoded by this gene is a member of the RNase A superfamily though it has relatively weak ribonucleolytic activity. This protein is a potent mediator of new blood vessel formation and thus, in addition to the name RNase5, is commonly called angiogenin. This protein induces angiogenesis after binding to actin on the surface of endothelial cells. This protein also accumulates at the nucleolus where it stimulates ribosomal transcription. Under stress conditions this protein translocates to the cytosol where it hydrolyzes cellular tRNAs and influences protein synthesis. A signal peptide is cleaved from the precursor protein to produce a mature protein which contains a nuclear localization signal, a cell binding motif, and a catalytic domain. This protein has been shown to be both neurotrophic and neuroprotective and the mature protein has antimicrobial activity against some bacteria and fungi, including *S. pneumoniae* and *C. albicans*. Due to its effect on rRNA production and angiogenesis this gene plays important roles in cell growth and tumor progression. Mutations in this gene are associated with progression of amyotrophic lateral sclerosis (ALS). This gene and the neighboring RNase4 gene share promoters and 5' exons though each gene then splices to a distinct 3' exon containing the complete coding region of each gene. Alternative splicing results in multiple transcript variants encoding the same protein. [provided by RefSeq, Jul 2020]

Product images:



Circular map for RG208874