

## Product datasheet for **RG223486**

### Angiogenin (ANG) (NM\_001097577) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Angiogenin (ANG) (NM\_001097577) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** ANG  
**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:** >RG223486 representing NM\_001097577  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTGATGGCCTGGGCGTTTTGTTGTTGGTCTTCGTGCTGGGTCTGGGTCTGACCCACCGACCCTGG  
CTCAGGATAACTCCAGGTACACACACTTCTGACCCAGCACTATGATGCCAAACCACAGGGCCGGGATGA  
CAGATACTGTGAAAGCATCATGAGGAGACGGGGCCTGACCTCACCTGCAAAGACATCAACACATTTATT  
CATGGCAACAAGCGCAGCATCAAGGCCATCTGTGAAAACAAGAATGGAACCCCTCACAGAGAAAACCTAA  
GAATAAGCAAGTCTTCTTCCAGGTCACCCTGCAAGCTACATGGAGGTTCCCCTGGCCTCCATGCCA  
GTACCGAGCCACAGCGGGTTGAGAAACGTTGTTGCTTGTAAGAAATGGCTTACTGTCCACTGGAT  
CAGTCAATTTCCGTCGTCGG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG223486 representing NM\_001097577  
Red=Cloning site Green=Tags(s)

MVMGLGVLLL VFVLGLGLTPPTLAQDNSRYTHFLTQHYDAKPQGRDDRYCESIMRRRGLTSPCKDINTFI  
HGNKRSIKAICENKNGNPHRENLRISKSSFQVTTCKLHGGSPWPPCQYRATAGFRNVVACENGLPVHLD  
QSIFRRP

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** SgfI-MluI



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<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_001097577.3</u>
<b>RefSeq Size:</b>	762 bp
<b>RefSeq ORF:</b>	444 bp
<b>Locus ID:</b>	283
<b>UniProt ID:</b>	<u>P03950</u>
<b>Cytogenetics:</b>	14q11.2
<b>Protein Families:</b>	Druggable Genome, Secreted Protein, Transmembrane
<b>Gene Summary:</b>	<p>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 <i>S. pneumoniae</i> and <i>C. albicans</i>. 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]</p>