

**Angiogenin Fragment (108-122)**  
**Synthetic Peptide**  
**Catalog # SP2657a****Specification****Angiogenin Fragment (108-122) - Product Information**

Primary Accession [P03950](#)  
Other Accession [Q71MJ0](#), [Q8WN67](#), [Q8WME8](#)  
Sequence [NH2-ENGLPVHLDQSIFRR-COOH](#)

**Angiogenin Fragment (108-122) - Additional Information**

**Gene ID** 283

**Other Names**

Angiogenin, 3127-, Ribonuclease 5, RNase 5, ANG, RNASE5

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Angiogenin Fragment (108-122) - Protein Information**

**Name** ANG {ECO:0000303|PubMed:11919285, ECO:0000312|HGNC:HGNC:483}

**Function**

Secreted ribonuclease that can either promote or restrict cell proliferation of target cells, depending on the context (PubMed: [12051708](http://www.uniprot.org/citations/12051708), PubMed: [1400510](http://www.uniprot.org/citations/1400510), PubMed: [19332886](http://www.uniprot.org/citations/19332886), PubMed: [20129916](http://www.uniprot.org/citations/20129916), PubMed: [21855800](http://www.uniprot.org/citations/21855800), PubMed: [23047679](http://www.uniprot.org/citations/23047679), PubMed: [23843625](http://www.uniprot.org/citations/23843625), PubMed: [2424496](http://www.uniprot.org/citations/2424496), PubMed: [2459697](http://www.uniprot.org/citations/2459697), PubMed: [2730651](http://www.uniprot.org/citations/2730651), PubMed: [27518564](http://www.uniprot.org/citations/27518564), PubMed: [28176817](http://www.uniprot.org/citations/28176817), PubMed: [29100074](http://www.uniprot.org/citations/29100074), PubMed: [29748193](http://www.uniprot.org/citations/29748193))

target="\_blank">3122207</a>, PubMed:<a href="http://www.uniprot.org/citations/32510170" target="\_blank">32510170</a>, PubMed:<a href="http://www.uniprot.org/citations/38718836" target="\_blank">38718836</a>, PubMed:<a href="http://www.uniprot.org/citations/8159680" target="\_blank">8159680</a>, PubMed:<a href="http://www.uniprot.org/citations/8570639" target="\_blank">8570639</a>, PubMed:<a href="http://www.uniprot.org/citations/8622921" target="\_blank">8622921</a>, PubMed:<a href="http://www.uniprot.org/citations/9578571" target="\_blank">9578571</a>). Endocytosed in target cells via its receptor PLXNB2 and translocates to the cytoplasm or nucleus (PubMed:<a href="http://www.uniprot.org/citations/29100074" target="\_blank">29100074</a>, PubMed:<a href="http://www.uniprot.org/citations/32510170" target="\_blank">32510170</a>). Under stress conditions, localizes to the cytoplasm and promotes the assembly of stress granules (SGs): specifically cleaves a subset of tRNAs within anticodon loops to produce tRNA- derived stress-induced fragments (tiRNAs), resulting in translation repression and inhibition of cell proliferation (PubMed:<a href="http://www.uniprot.org/citations/1400510" target="\_blank">1400510</a>, PubMed:<a href="http://www.uniprot.org/citations/19332886" target="\_blank">19332886</a>, PubMed:<a href="http://www.uniprot.org/citations/20129916" target="\_blank">20129916</a>, PubMed:<a href="http://www.uniprot.org/citations/21855800" target="\_blank">21855800</a>, PubMed:<a href="http://www.uniprot.org/citations/23047679" target="\_blank">23047679</a>, PubMed:<a href="http://www.uniprot.org/citations/27518564" target="\_blank">27518564</a>, PubMed:<a href="http://www.uniprot.org/citations/29100074" target="\_blank">29100074</a>, PubMed:<a href="http://www.uniprot.org/citations/29748193" target="\_blank">29748193</a>, PubMed:<a href="http://www.uniprot.org/citations/32510170" target="\_blank">32510170</a>, PubMed:<a href="http://www.uniprot.org/citations/38718836" target="\_blank">38718836</a>). tiRNAs also prevent formation of apoptosome, thereby promoting cell survival (By similarity). Preferentially cleaves RNAs between a pyrimidine and an adenosine residue, suggesting that it cleaves the anticodon loop of tRNA(Ala) (32-UUAGCAU-38) after positions 33 and 36 (PubMed:<a href="http://www.uniprot.org/citations/3289612" target="\_blank">3289612</a>, PubMed:<a href="http://www.uniprot.org/citations/38718836" target="\_blank">38718836</a>). Cleaves a subset of tRNAs, including tRNA(Ala), tRNA(Glu), tRNA(Gly), tRNA(Lys), tRNA(Val), tRNA(His), tRNA(Asp) and tRNA(Sec) (PubMed:<a href="http://www.uniprot.org/citations/31582561" target="\_blank">31582561</a>). Under growth conditions and in differentiated cells, translocates to the nucleus and stimulates ribosomal RNA (rRNA) transcription, including that containing the initiation site sequences of 45S rRNA, thereby promoting cell growth and proliferation (PubMed:<a href="http://www.uniprot.org/citations/12051708" target="\_blank">12051708</a>, PubMed:<a href="http://www.uniprot.org/citations/15735021" target="\_blank">15735021</a>, PubMed:<a href="http://www.uniprot.org/citations/27518564" target="\_blank">27518564</a>, PubMed:<a href="http://www.uniprot.org/citations/29100074" target="\_blank">29100074</a>, PubMed:<a href="http://www.uniprot.org/citations/8127865" target="\_blank">8127865</a>). Angiogenin induces vascularization of normal and malignant tissues via its ability to promote rRNA transcription (PubMed:<a href="http://www.uniprot.org/citations/19354288" target="\_blank">19354288</a>, PubMed:<a href="http://www.uniprot.org/citations/4074709" target="\_blank">4074709</a>, PubMed:<a href="http://www.uniprot.org/citations/8448182" target="\_blank">8448182</a>). Involved in hematopoietic stem and progenitor cell (HSPC) growth and survival by promoting rRNA transcription in growth conditions and inhibiting translation in response to stress, respectively (PubMed:<a href="http://www.uniprot.org/citations/27518564" target="\_blank">27518564</a>). Mediates the crosstalk between myeloid and intestinal epithelial cells to protect the intestinal epithelial barrier integrity: secreted by myeloid cells and promotes intestinal epithelial cells proliferation and survival (PubMed:<a href="http://www.uniprot.org/citations/32510170" target="\_blank">32510170</a>). Also mediates osteoclast-endothelial cell crosstalk in growing bone: produced by osteoclasts and protects the neighboring vascular cells against senescence by promoting rRNA transcription (By similarity).

### Cellular Location

Secreted. Nucleus. Nucleus, nucleolus. Cytoplasm, Stress granule. Note=The secreted protein is rapidly endocytosed by target cells following interaction with PLXNB2 receptor and translocated to

the cytoplasm and nucleus (PubMed:29100074). In the nucleus, accumulates in the nucleolus and binds to DNA (PubMed:12051708).

**Tissue Location**

Expressed predominantly in the liver (PubMed:2440105). Also detected in endothelial cells and spinal cord neurons (PubMed:17886298, PubMed:2440105)

**Angiogenin Fragment (108-122) - Images**