

## Product datasheet

# Mouse Angiogenin ELISA Kit ab208349

SimpleStep ELISA<sup>®</sup>

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### Overview

**Product name** Mouse Angiogenin ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
serum	8			2.3%

Inter-assay

Sample	n	Mean	SD	CV%
serum	3			2.6%

**Sample type** Cell culture supernatant, Serum, Plasma

**Assay type** Sandwich (quantitative)

**Sensitivity** 16.7 pg/ml

**Range** 62.5 pg/ml - 4000 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	106	105% - 107%
Cell culture media	101	100% - 103%
Hep Plasma	106	104% - 108%
EDTA Plasma	107	105% - 110%
Cit plasma	102	92% - 110%

**Assay time** 1h 30m

**Assay duration** One step assay

**Species reactivity** **Reacts with:** Mouse  
**Does not react with:** Goat, Cow, Pig

**Product overview** Abcam's Angiogenin *in vitro* SimpleStep ELISA<sup>®</sup> (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Angiogenin protein in mouse serum, plasma, and cell culture supernatants.

The SimpleStep ELISA<sup>®</sup> employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

**Notes** Mouse Angiogenin is a member of the pancreatic ribonuclease A superfamily and is a potent inducer of neovascularization. Furthermore, Angiogenin is essential for cell growth and proliferation. Angiogenin direct binding to the promoter region of ribosomal DNA induces ribosomal RNA transcription and cell proliferation required for ribosomal biogenesis and the action of angiogenic factors. Increased Angiogenin serum levels have been associated with the incidence and severity of several types of tumors. Mouse Angiogenin is 145 amino acids (aa) in length, with a 24 aa signal peptide, and contains three intra-chain disulfide bonds. Human and rat Angiogenin are 74% and 83% identical to mouse Angiogenin, respectively.

**Platform** Microplate (12 x 8 well strips)

## Properties

**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse Angiogenin Capture Antibody	1 x 600µl
10X Mouse Angiogenin Detector Antibody	1 x 600µl
10X Wash Buffer PT ( <a href="#">ab206977</a> )	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Mouse Angiogenin Recombinant Lyophilized Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS ( <a href="#">ab193972</a> )	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate ( <a href="#">ab206978</a> )	1 x 96 tests
Stop Solution	1 x 12ml

## Components

1 x 96 tests

TMB Development Solution

1 x 12ml

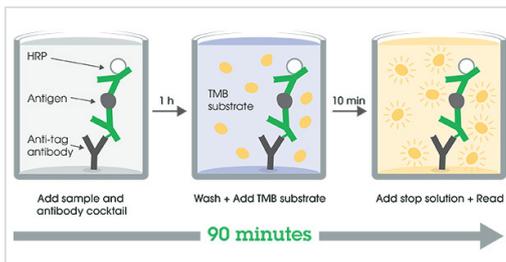
## Relevance

Angiogenin is a member of the ribonuclease superfamily with approximately 35% amino acid sequence identity with pancreatic RNase. Like other members of the ribonuclease superfamily, angiogenin is a cytotoxic agent that can eliminate cellular protein synthesis. Angiogenin causes inhibition of protein synthesis by functioning as a cytotoxic tRNA-specific RNase. Angiogenesis is the formation of blood vessels or capillaries from existing blood vessels due to specific signals. Angiogenin induces the growth of new blood vessels. It stimulates capillary and umbilical vein endothelial cells to produce diacylglycerol and secrete prostacyclin by phospholipase activation. Angiogenin exhibits both angiogenic and non-angiogenic activities and is involved in endothelial cell migration, proliferation, and differentiation. It is produced by a variety of tumor and normal cell types. Cells that express angiogenin include vascular endothelial and smooth muscle cells, fibroblasts, normal colonic epithelium, normal peripheral blood lymphocytes, lung and colonic epithelial tumor cell lines, and primary gastrointestinal adenocarcinomas. Angiogenin is also present in normal human plasma.

## Cellular localization

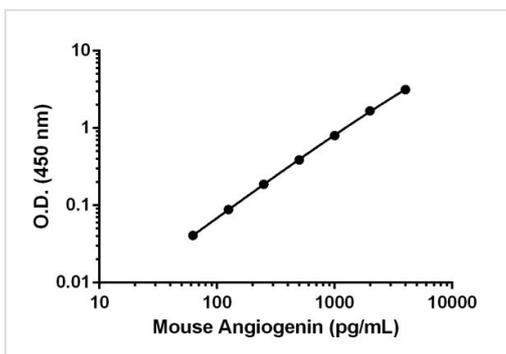
Nuclear and Secreted

## Images



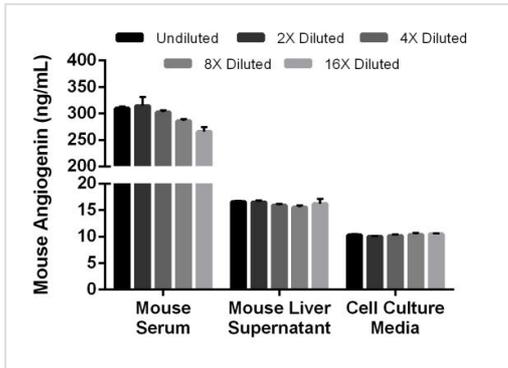
Other - Mouse Angiogenin ELISA Kit (ab208349)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



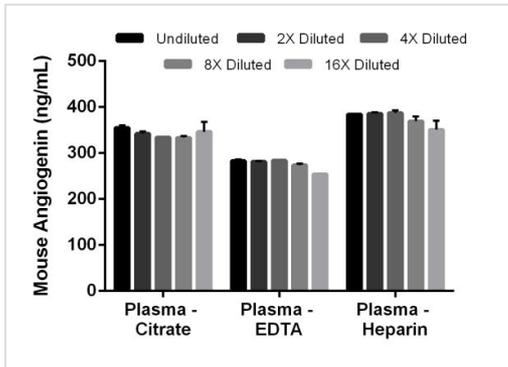
Example of mouse Angiogenin standard curve

Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native Angiogenin in mouse serum and mouse liver supernatant and spiked recombinant Angiogenin in cell culture media

The concentrations of Angiogenin were measured in duplicates, interpolated from the Angiogenin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1.25%, mouse liver supernatant 20% and cell culture media 20%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Angiogenin concentration was determined to be 295.7 ng/mL in serum, 16.2 ng/mL in mouse liver supernatant and 10.3 ng/mL in cell culture media. Mouse liver was cultured for 5 days in RPMI base media with 10% fetal bovine serum and supernatants were collected according to section 11.3.



Interpolated concentrations of native Angiogenin in mouse plasma samples

The concentrations of Angiogenin were measured in duplicates, interpolated from the Angiogenin standard curves and corrected for sample dilution. Undiluted samples are as follows: plasma (citrate) 1%, plasma (EDTA) 1.25%, and plasma (heparin) 1%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Angiogenin concentration was determined to be 342.4 ng/mL in plasma (citrate), 275.4 ng/mL in plasma (EDTA) and 375.6 ng/mL in plasma (heparin).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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