

Mouse Angiogenin ELISA Kit ab208349

Recombinant SimpleStep ELISA

4 References 5 Images

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**

Mouse Angiogenin ELISA Kit (ab208349) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Angiogenin protein in cell culture supernatant, serum, and plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse Angiogenin with 16.7 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

**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 (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Mouse Angiogenin Recombinant Lyophilized Protein	2 vials
Plate Seals	1 unit

Components	1 x 96 tests
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

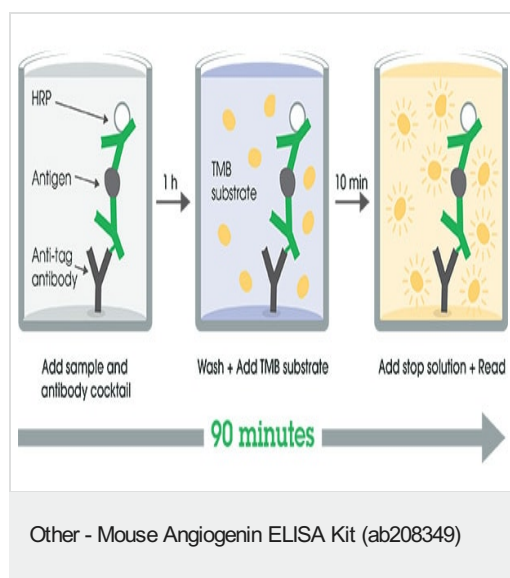
## Relevance

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.

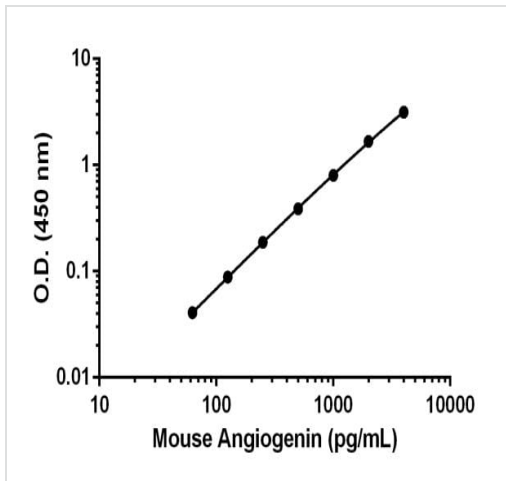
## Cellular localization

Nuclear and Secreted

## Images

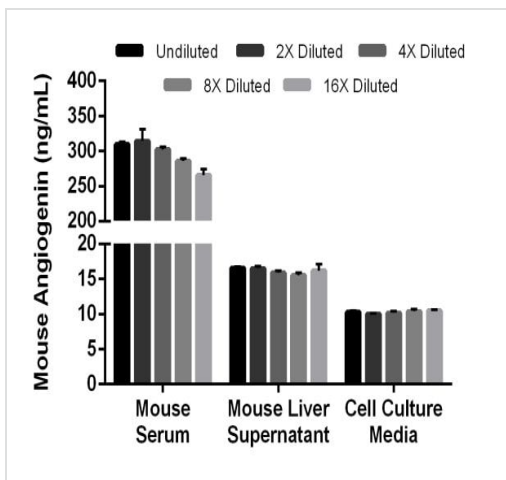


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



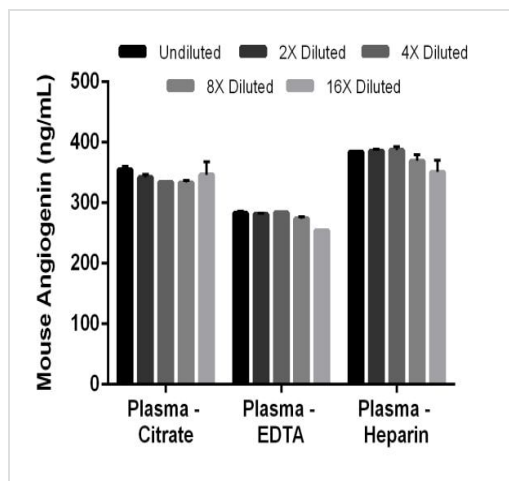
Background-subtracted data values (mean  $\pm$  SD) are graphed.

Example of mouse Angiogenin standard curve



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  $\pm$  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 serum and mouse liver supernatant and spiked recombinant Angiogenin in cell culture media



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  $\pm$  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).

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Sandwich ELISA - Mouse Angiogenin ELISA Kit  
(ab208349)

To learn more about the advantages of recombinant antibodies see [here](#).

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

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