

Human Amphiregulin ELISA Kit ab222504

Recombinant SimpleStep ELISA

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Overview

Product name Human Amphiregulin ELISA Kit

Detection method Colorimetric

Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Amphiregulin	3			1.8%

	Inter-assay				
	Sample	n	Mean	SD	CV%
	Amphiregulin	5			4.1%

Sample type Cell culture supernatant, Serum, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 1.2 pg/ml

Range 18 pg/ml - 600 pg/ml

Recovery	Sample specific recovery		
	Sample type	Average %	Range
	Serum	106	84% - 117%
	Cell culture media	108	106% - 110%
	EDTA Plasma	98	91% - 104%
	Cit plasma	103	93% - 111%

Assay time 1h 30m

Assay duration One step assay

Species reactivity Reacts with: Human

## Product overview

Human Amphiregulin ELISA Kit (ab222504) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Amphiregulin protein in cell culture supernatant, cit plasma, edta plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Amphiregulin with 2.4 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

Amphiregulin is a member of the epidermal growth factor family encoded by the AREG gene. Amphiregulin is expressed as a 252- amino acid transmembrane glycoprotein, which contains an 81-amino acid N-terminal pro-peptide, a heparin binding domain, a EGF like domain, a 23- amino acid transmembrane domain, and a 31- amino acid cytoplasmic domain. The amphiregulin assay utilizes antibodies raised against the 101-187 amino acid region of the amphiregulin protein. Amphiregulin is an autocrine growth factor, a mitogen for several cell types, and is essential for mammary ductal development.

## Platform

Pre-coated microplate (12 x 8 well strips)

## Properties

### Storage instructions

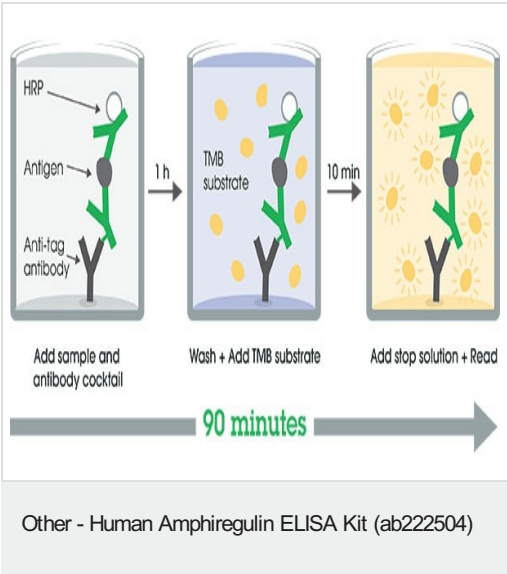
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human Amphiregulin Capture Antibody	1 x 600µl
10X Human Amphiregulin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Human Amphiregulin Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

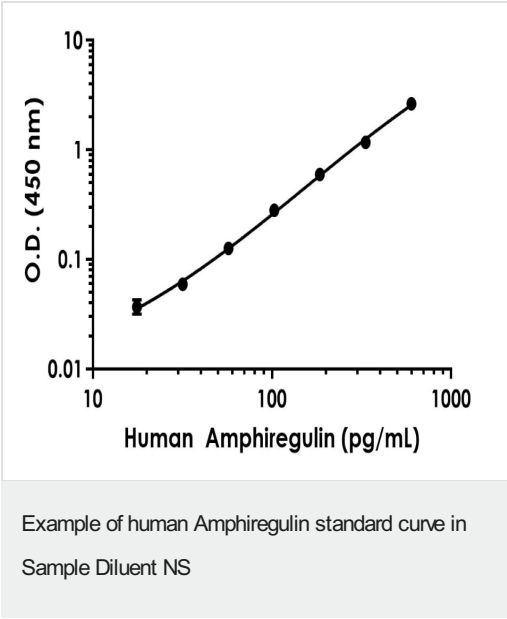
Components	1 x 96 tests
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function	Bifunctional growth-modulating glycoprotein. Inhibits growth of several human carcinoma cells in culture and stimulates proliferation of human fibroblasts and certain other tumor cells.
Sequence similarities	Belongs to the amphiregulin family. Contains 1 EGF-like domain.
Cellular localization	Membrane.

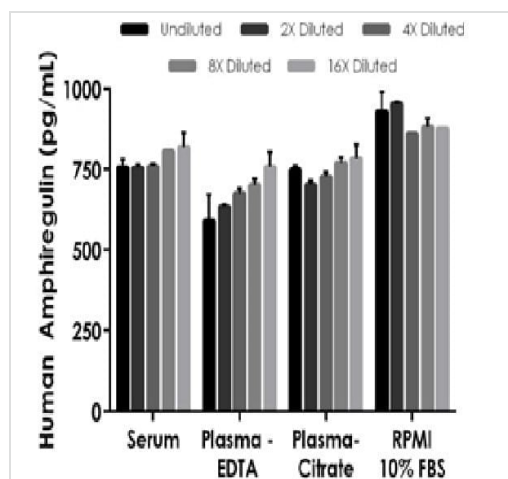
Images



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.

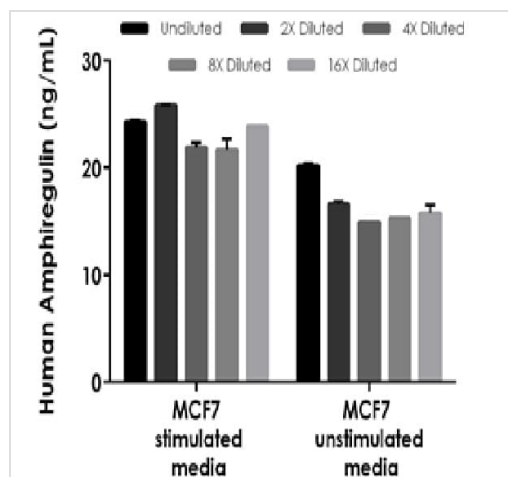


The Amphiregulin standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of spiked Amphiregulin in human serum, plasma and cell culture supernatant samples.

The concentrations of Amphiregulin were measured in duplicates, interpolated from the Amphiregulin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (EDTA) 50%, plasma (citrate) 50%, RPMI media 50%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2).



Interpolated concentrations of native Amphiregulin in human MCF7 cell culture supernatant.

Human MCF7s were stimulated with 2% PHA for 3 days before the supernatant was collected and assayed. The concentrations of Amphiregulin were measured in duplicate and interpolated from the Amphiregulin standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Amphiregulin concentration was determined to be 23.7 ng/mL in stimulated and 16 ng/mL in unstimulated MCF7 cell culture supernatant.

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Sandwich ELISA - Human Amphiregulin ELISA Kit  
(ab222504)

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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