

Product datasheet

Human EGF ELISA Kit ab217772

Recombinant SimpleStep ELISA

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Overview

Product name Human EGF ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Human serum	5			8%

Inter-assay

Sample	n	Mean	SD	CV%
Human serum	3			7%

Sample type

Cell culture supernatant, Saliva, Milk, Urine, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

1.04 pg/ml

Range

1.562 pg/ml - 100 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Saliva	92	90% - 96%
Milk	96	81% - 121%
Urine	103	101% - 105%
Serum	108	93% - 122%
Cell culture media	91	88% - 95%
Hep Plasma	109	104% - 114%

Sample type	Average %	Range
EDTA Plasma	116	104% - 127%
Cit plasma	112	100% - 126%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Does not react with: Cow

Product overview

Human EGF ELISA Kit (ab217772) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of EGF protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, milk, saliva, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human EGF with 1.04 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

EGF precursor is a large 1185 amino acid group 1 member of the EGF family growth factors. All EGF family growth factors are synthesized as transmembrane proteins that undergo proteolytic processing to generate soluble forms. Human EGF is a 53 amino acid long fragment of the extracellular domain of EGF precursor. As other group 1 members, EGF binds to, and activates the EGF receptor. This promotes EGFR dimerization. EGF has variety of diverse physiological effects. EGF activity is complicated by the fact that other EGF family members utilize EGF receptor. EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. EGF is proposed to affect growth and/or differentiation of many other fetal and adult tissues.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

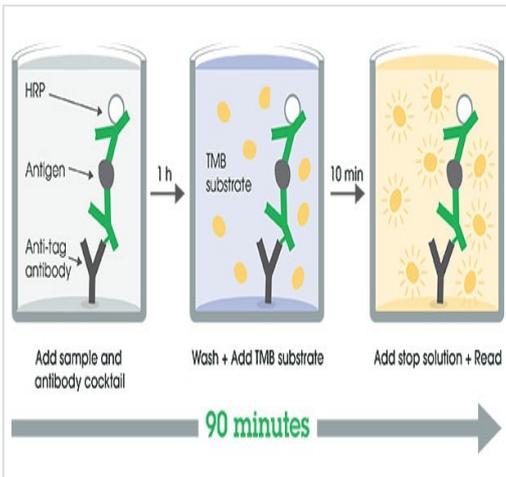
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human EGF Capture Antibody	1 x 600µl

Components	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Human EGF Detector Antibody (Lyophilized)	1 vial
Human EGF Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent 50BP	1 x 20ml
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

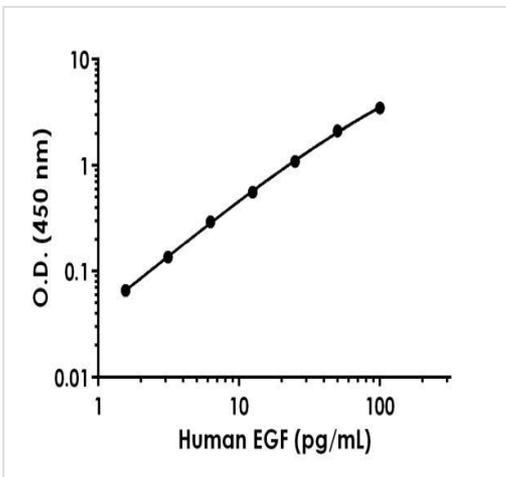
Function	EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. Magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6. Can induce neurite outgrowth in motoneurons of the pond snail <i>Lymnaea stagnalis</i> in vitro (PubMed:10964941).
Tissue specificity	Expressed in kidney, salivary gland, cerebrum and prostate.
Involvement in disease	Hypomagnesemia 4
Sequence similarities	Contains 9 EGF-like domains. Contains 9 LDL-receptor class B repeats.
Post-translational modifications	O-glycosylated with core 1-like and core 2-like glycans. It is uncertain if Ser-954 or Thr-955 is O-glycosylated. The modification here shows glycan heterogeneity: HexHexNAc (major) and Hex2HexNAc2 (minor).
Cellular localization	Membrane.

Images



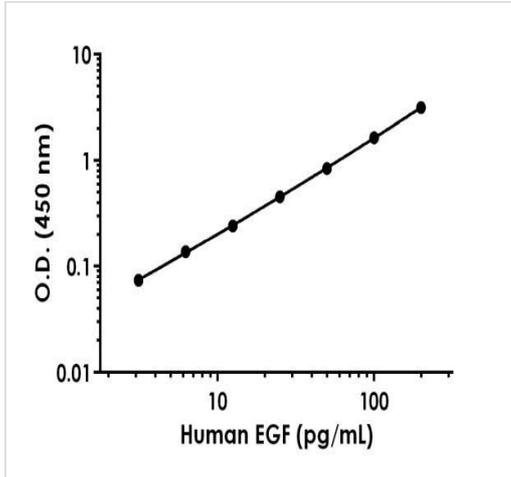
Other - Human EGF ELISA Kit (ab217772)

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.



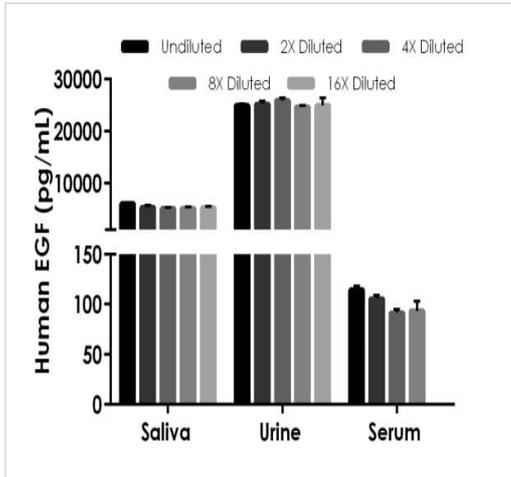
Example of human EGF standard curve in Sample Diluent NS.

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



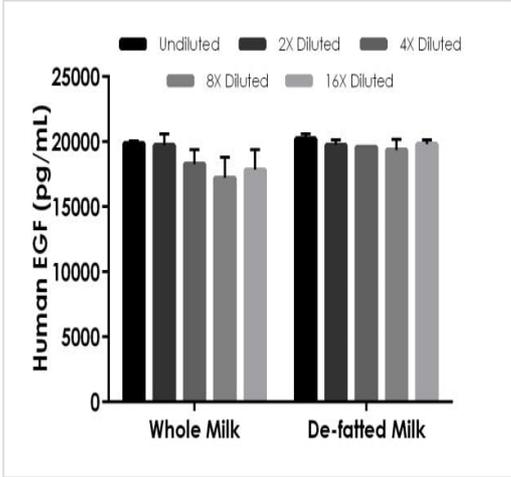
Background-subtracted data values (mean +/- SD) are graphed.

Example of human EGF standard curve in Sample Diluent 50BP.



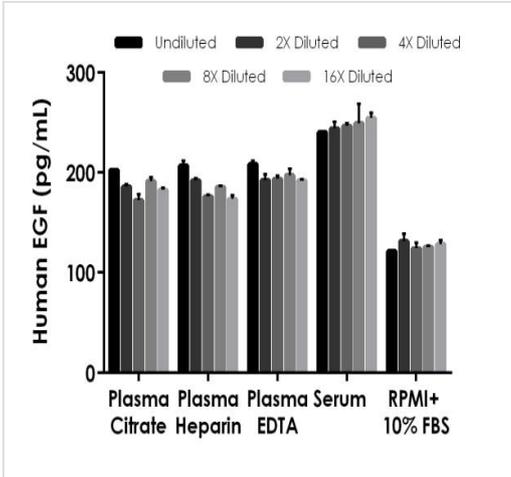
The concentrations of EGF were measured in duplicates, interpolated from the EGF standard curves and corrected for sample dilution. Undiluted samples are as follows: saliva 2.5%, urine 0.4% and serum 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean EGF concentration was determined to be 5377 pg/mL in neat saliva, 25147 pg/mL in neat urine, and 101 pg/mL in neat serum.

Interpolated concentrations of native EGF in saliva, urine, and serum samples.



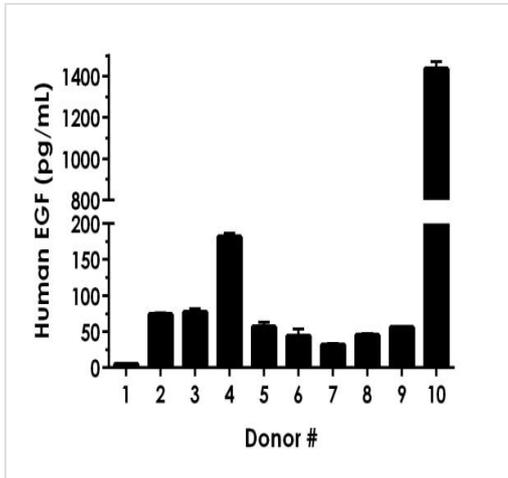
Interpolated concentrations of native EGF in whole and de-fatted human breast milk samples.

The concentrations of EGF were measured in duplicates, interpolated from the EGF standard curves and corrected for sample dilution. Undiluted samples are as follows: whole milk 100%, de-fatted milk 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean EGF concentration was determined to be 18,596 pg/mL in neat whole milk and 19,757 pg/mL in neat de-fatted milk.



Interpolated concentrations of spiked EGF.

Interpolated concentrations of a 200 pg/mL recombinant EGF spike in human platelet poor plasma citrate, platelet poor plasma heparin, platelet poor plasma EDTA, serum, and a 100 pg/mL recombinant EGF spike in RPMI +10% FBS media samples. The concentrations of EGF were measured in duplicates, interpolated from the EGF standard curves and corrected for sample dilution. Undiluted samples are as follows: plasma citrate 50%, plasma heparin 50%, plasma EDTA 50%, serum 50%, and RPMI + 10% FBS 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean EGF concentration was determined to be 200 pg/mL with a range of 5.3 – 1436 pg/mL.

Serum from ten individual healthy human female donors was measured in duplicate.

Powered by recombinant antibodies

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Sandwich ELISA - Human EGF ELISA Kit
(ab217772)

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

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