

Product datasheet

Human eIF4E ELISA Kit ab214564

Recombinant **SimpleStep ELISA**

[4 Images](#)

Overview

Product name Human eIF4E ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
MCF7 extract	8			3.4%

Inter-assay

Sample	n	Mean	SD	CV%
MCF7 extract	3			10%

Sample type Cell culture extracts, Tissue Extracts

Assay type Sandwich (quantitative)

Sensitivity 79.4 pg/ml

Range 109.4 pg/ml - 7000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Tissue Extracts	108	106% - 111%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview

Human eIF4E ELISA Kit (ab214564) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of eIF4E protein in cell culture extracts and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human eIF4E with 34.69 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 Eukaryotic translation initiation factor 4E (eIF4E) plays a role in the initial stages of translation by recognizing the 7-methyl-guanosine cap on the 5' end of mRNA. By unwinding mRNA secondary structure, it facilitates ribosomal recruitment. eIF4E is also a part of a complex containing CYFIP1 and FMR1 that can repress translation.

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Platform Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Please refer to protocols.

Components	1 x 96 tests
10X Human eIF4E Capture Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BR	1 x 6ml
Human eIF4E Detector Antibody Concentrate	1 x 20µl
Human eIF4E Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml

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

Function

Its translation stimulation activity is repressed by binding to the complex CYFIP1-FMR1 (By similarity). Recognizes and binds the 7-methylguanosine-containing mRNA cap during an early step in the initiation of protein synthesis and facilitates ribosome binding by inducing the unwinding of the mRNAs secondary structures. Component of the CYFIP1-EIF4E-FMR1 complex which binds to the mRNA cap and mediates translational repression. In the CYFIP1-EIF4E-FMR1 complex this subunit mediates the binding to the mRNA cap.

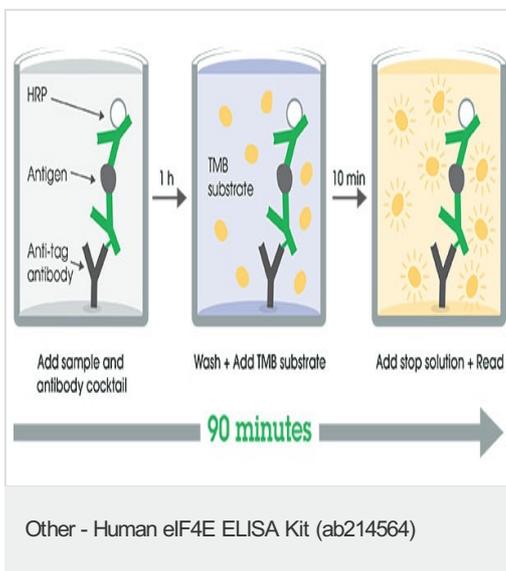
Sequence similarities

Belongs to the eukaryotic initiation factor 4E family.

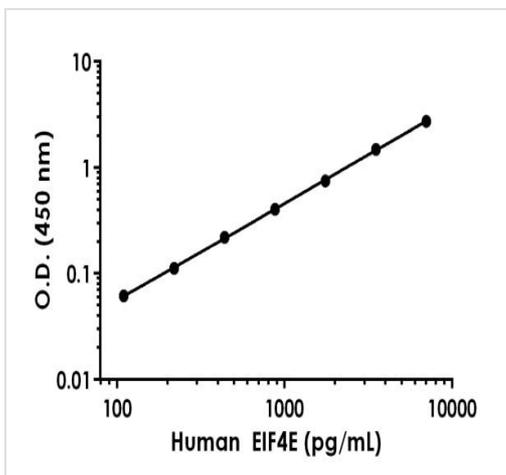
Post-translational modifications

Phosphorylation increases the ability of the protein to bind to mRNA caps and to form the eIF4F complex.

Images

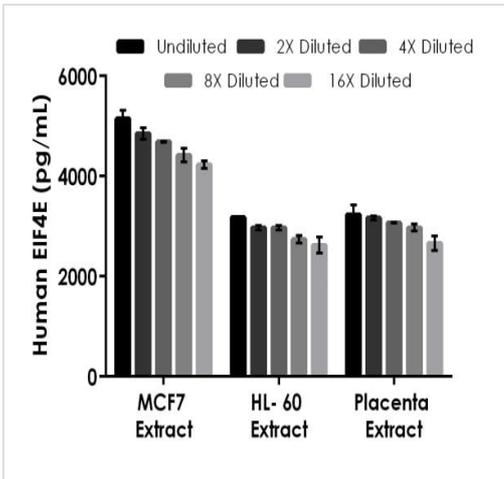


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



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

Example of human eIF4E standard curve in 1X Cell Extraction Buffer PTR.



The concentrations of eIF4E were measured in duplicate and interpolated from the eIF4E standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean eIF4E concentration was determined to be 4,667 pg/mL in MCF7, 2,899 pg/mL in HL-60, and 3,021 pg/mL in placenta.

Interpolated concentrations of native eIF4E in human MCF7, HL-60, and placenta based on a 50 µg/mL, 120 µg/mL, and 1,000 µg/mL extract load.

Powered by recombinant antibodies

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Sandwich ELISA - Human eIF4E ELISA Kit
(ab214564)

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

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