

## Product datasheet

# Human IgE ELISA Kit ab195216

SimpleStep ELISA

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### Overview

**Product name** Human IgE ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			4.04%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			3.53%

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

**Assay type** Sandwich (quantitative)

**Sensitivity** 0.02 ng/ml

**Range** 0.11 ng/ml - 1.33 ng/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	108	98% - 118%
Cell culture media	107	96% - 118%
Hep Plasma	100	98% - 102%
EDTA Plasma	97	84% - 115%
Cit plasma	111	102% - 116%

**Assay time** 1h 30m

**Assay duration** One step assay

## Species reactivity

**Reacts with:** Human

## Product overview

Human IgE ELISA Kit (ab195216) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IgE protein in serum, cell culture supernatant, and plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IgE with 0.02 ng/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

Human Immunoglobulin E (IgE) is a class of antibodies that plays a fundamental role in various allergic reactions. IgE is composed of two heavy chains and two light chains, found to be typical of Ig molecules. The epsilon heavy chain attaches to its high-affinity receptor Fc epsilon receptor (FcεR1) found primarily on mast cells, basophils, and eosinophils. Binding of IgE to its receptor initiates a release of vasoactive amines (i.e. histamines) and other mediators of allergic responses into the surrounding tissue.

Human IgE is produced in the lungs, skin and mucous membrane, but is typically the least abundant antibody isotope. Its main function is immunity against parasites such as parasitic worms like *Schistosoma mansoni*, *Trichinella spiralis*, and *Fasciola hepatica*. IgE also plays a role in type I hypersensitivity, which manifests various allergic diseases, such as allergic asthma, most types of sinusitis, allergic rhinitis, food allergy, and some types of chronic urticaria, and atopic dermatitis.

## Platform

Microplate

## Properties

### Storage instructions

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

Components	1 x 96 tests
10X Human IgE Capture Antibody	1 x 600µl
10X Human IgE Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human IgE Lyophilized Purified Protein	2 vials

Components	1 x 96 tests
Plate Seals	1 unit
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

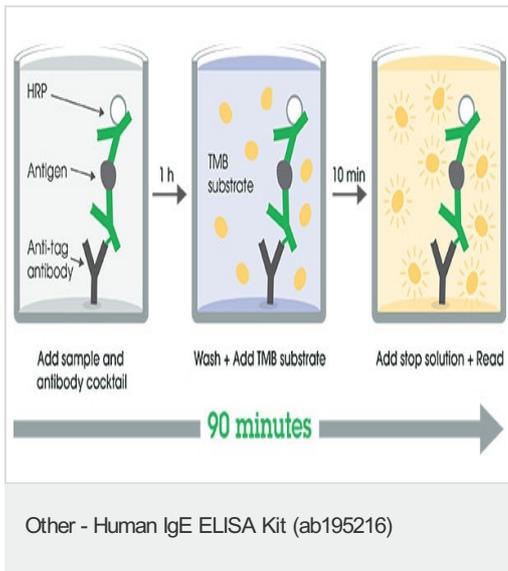
**Relevance**

IgE is the class of antibodies produced in the lungs, skin, and mucous membranes. It may protect against parasite invasion, but it is a major factor in allergic reactions. The antigen-specific IgE interacts with mast cells and eosinophils, triggers the release of histamine, leukotrienes and other substances that lead to the itching, sneezing and congestion of allergies - and the life threatening respiratory distress of asthma and anaphylactic shock.

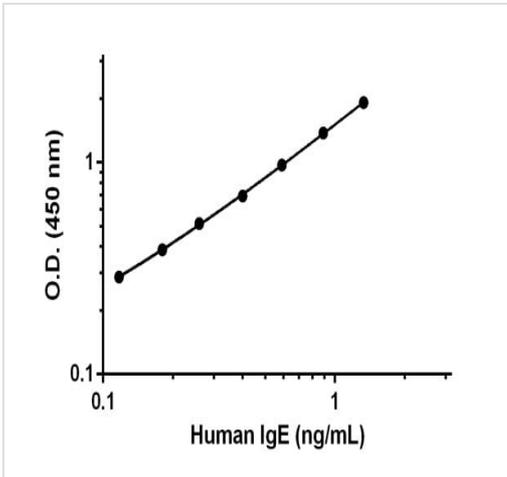
**Cellular localization**

Secreted

**Images**

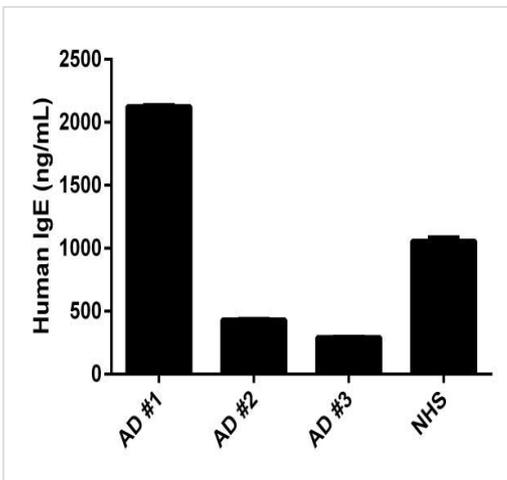


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



Example of Human IgE standard curve in Sample Diluent NS.

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



Human IgE levels in individual Atopic Dermatitis (AD) donors and normal Human serum (NHS).

Three individual AD donors and NHS pooled from 50 healthy donors were evaluated for the presence of Human IgE in serum using this assay. Results were interpolated from the standard curve in Sample Diluent NS and corrected for sample dilution (1:5,000). The mean level of Human IgE was found at 950 ng/mL for AD donors with a range of 290 – 2,126.5 ng/mL. The level of Human IgE in NHS was found at 1,000 ng/mL.

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