

Human IRAK-1 ELISA Kit ab219630

Recombinant SimpleStep ELISA®

4 Images

Overview

Product name Human IRAK-1 ELISA Kit

Detection method Colorimetric

Precision Intra-assay

Sample	n	Mean	SD	CV%
Overall	5			3.3%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			4%

Sample type Cell culture extracts

Assay type Sandwich (quantitative)

Sensitivity 22 pg/ml

Range 156 pg/ml - 10000 pg/ml

Recovery Sample specific recovery

Sample type	Average %	Range
Cell culture extracts	110	107% - 113%

Assay time 1h 30m

Assay duration One step assay

Species reactivity Reacts with: Human

Product overview Human IRAK-1 ELISA Kit (ab219630) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IRAK-1 protein in cell culture extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IRAK-1 with 22 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

IRAK-1 is a serine/threonine-protein kinase involved in the innate immune response against pathogens. IRAK-1's association with MYC88 after TLR activation leads to its phosphorylation by IRAK-4. IRAK-1 phosphorylation eventually results in the transcriptional activation of type 1 IFN genes.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

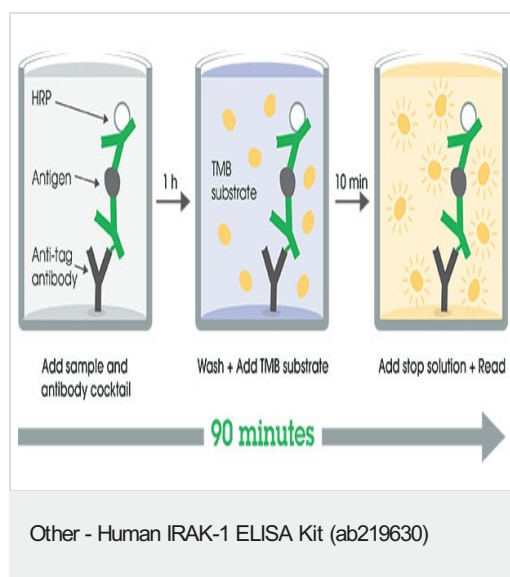
Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human IRAK-1 Capture Antibody	1 x 600µl
10X Human IRAK-1 Detector 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 4BI	1 x 6ml
Human IRAK-1 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

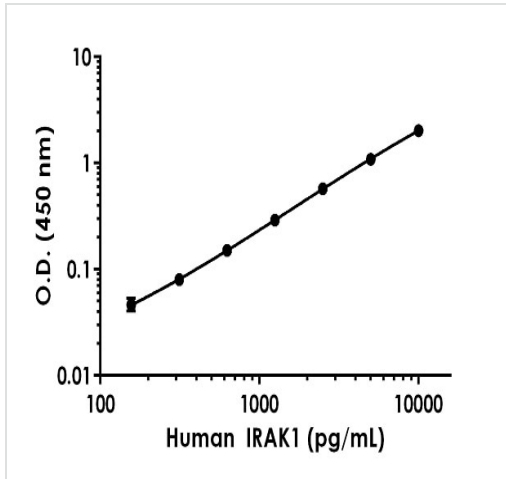
Components	1 x 96 tests
TMB Development Solution	1 x 12ml

Function	Binds to the IL-1 type I receptor following IL-1 engagement, triggering intracellular signaling cascades leading to transcriptional up-regulation and mRNA stabilization. Isoform 1 binds rapidly but is then degraded allowing isoform 2 to mediate a slower, more sustained response to the cytokine. Isoform 2 is inactive suggesting that the kinase activity of this enzyme is not required for IL-1 signaling. Once phosphorylated, IRAK1 recruits the adapter protein PELI1.
Tissue specificity	Isoform 1 and isoform 2 are ubiquitously expressed in all tissues examined, with isoform 1 being more strongly expressed than isoform 2.
Sequence similarities	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. Pelle subfamily. Contains 1 protein kinase domain.
Post-translational modifications	Autophosphorylated or is transphosphorylated by IRAK4 following recruitment to the IL-1RI. In the case of isoform 1, this is linked to ubiquitination and degradation. Polyubiquitinated; after cell stimulation with IL-1-beta. Polyubiquitination occurs with polyubiquitin chains linked through 'Lys-63'.

Images

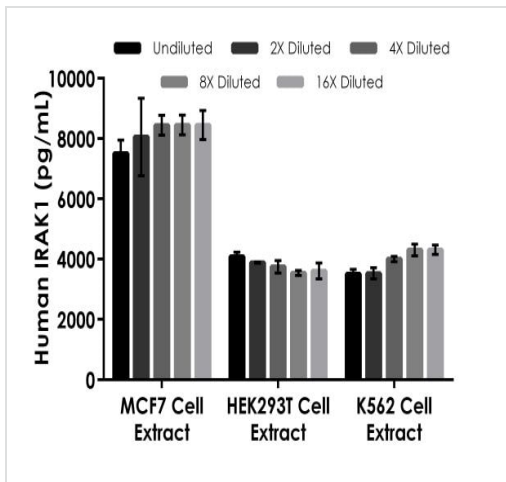


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



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

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



The concentrations of IRAK-1 were measured in duplicate and interpolated from the IRAK-1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IRAK-1 concentration was determined to be 8178 pg/mL in MCF7 extracts, 3768 pg/mL in HEK93T extracts, and 3927 pg/mL in K562 extracts.

Interpolated concentrations of native IRAK-1 in human MCF7, HEK293T, and K562 extracts based on a 500, 125 and 250 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 IRAK-1 ELISA Kit
(ab219630)

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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