

Human SIRP alpha ELISA Kit (CD172α) ab272477

Recombinant SimpleStep ELISA®

5 Images

Overview

Product name Human SIRP alpha ELISA Kit (CD172a)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
extract	8			2.5%

Inter-assay

Sample	n	Mean	SD	CV%
extract	3			5.2%

Sample type Tissue Extracts, Cell Lysate

Assay type Sandwich (quantitative)

Sensitivity 76.9 pg/ml

Range 156.25 pg/ml - 10000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Tissue Extracts	88	87% - 90%
Cell Lysate	99	91% - 105%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview Human SIRP ELISA kit (ab272477) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Human SIRP protein in cell and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human SIRP with 76.90 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 SIRP alpha (SIPRA or CD127a) is a 37.73 kD immunoglobulin-like cell surface receptor for CD47. SIRP alpha is involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors, or insulin. SIRP alpha may play a key role in intracellular signaling during synaptogenesis and in synaptic function (By similarity.) The antibodies are designed to a fragment of the extracellular domain of SIRP alpha.

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 SIRP alpha (CD172a) Capture Antibody	1 x 600µl
10X Human SIRP alpha (CD172a) 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 SIRP alpha (CD172a) Lyophilized Recombinant Protein	2 vials

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

Function

Immunoglobulin-like cell surface receptor for CD47. Acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. Supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment. May play a key role in intracellular signaling during synaptogenesis and in synaptic function (By similarity). Involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin. Mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation. CD47 binding prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells.

Tissue specificity

Ubiquitous. Highly expressed in brain. Detected on myeloid cells, but not T-cells. Detected at lower levels in heart, placenta, lung, testis, ovary, colon, liver, small intestine, prostate, spleen, kidney, skeletal muscle and pancreas.

Sequence similarities

Contains 2 Ig-like C1-type (immunoglobulin-like) domains.
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

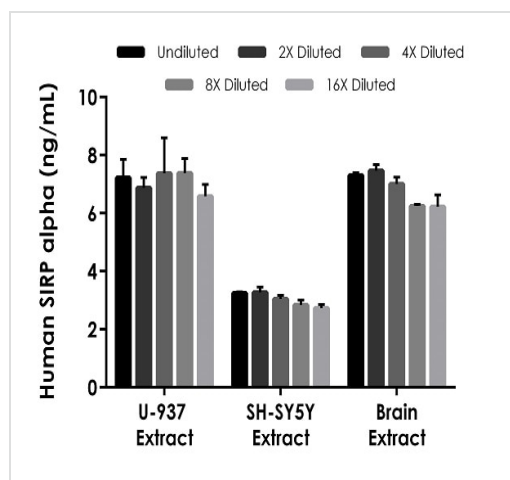
Post-translational modifications

N-glycosylated.
Phosphorylated on tyrosine residues in response to stimulation with EGF, growth hormone, insulin and PDGF. Dephosphorylated by PTPN11.

Cellular localization

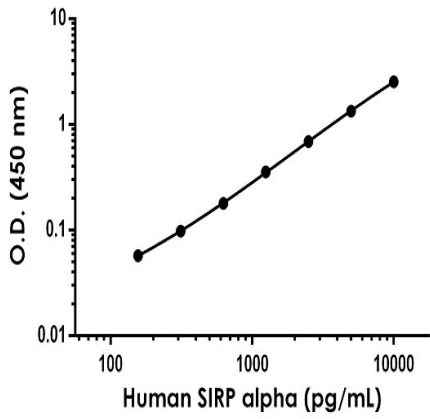
Membrane.

Images

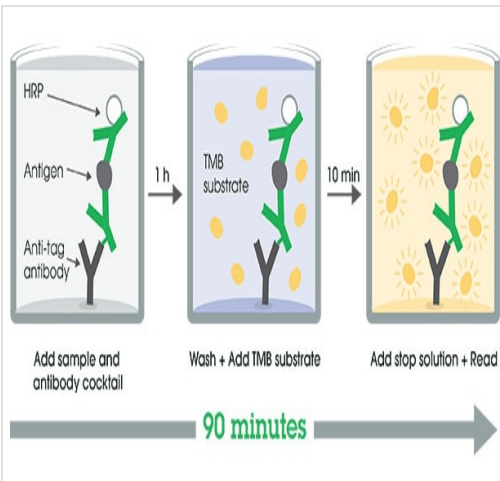


Interpolated concentrations of native SIRP alpha in human U-937 cell extract.

based on a 250 µg/mL extract load, SH-SY5Y cell extract based on a 2,000 µg/mL extract load, and brain tissue extract based on a 10 µg/mL extract load. The concentrations of SIRP alpha were measured in duplicate and interpolated from the SIRP alpha standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean SIRP alpha concentration was determined to be 7.08 ng/mL in U-937 extract and 3.03 ng/mL in SH-SY5Y extract, and 6.85 ng/mL in brain extract.



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



SimpleStep ELISA Protocol Diagram

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.

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 SIRP alpha ELISA Kit (CD172a) (ab272477)

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

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

Sandwich ELISA - Human SIRP alpha ELISA Kit
(CD172a) (ab272477)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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