

## Product datasheet

# Human Phospho-Src (Y416) ELISA Kit ab270886

Recombinant SimpleStep ELISA

[5 Images](#)

### Overview

**Product name** Human Phospho-Src (Y416) ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Extract	24			3.5%

Inter-assay

Sample	n	Mean	SD	CV%
Extract	3			5%

**Sample type**

Cell Lysate

**Assay type**

Sandwich (quantitative)

**Sensitivity**

0.052 U/ml

**Range**

0.31 U/ml - 20 U/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Cell Lysate	80	106% - 92%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Human

**Product overview**

Human Phospho-Src (Y416) ELISA (ab270886) kit is a single-wash 90 min sandwich ELISA designed for the **quantitative measurement** of phospho-Src (Y416) protein in human cell culture extracts. It uses our proprietary SimpleStep ELISA® technology. This Src ELISA can quantitate human Src (pY416) with 52 units/mL sensitivity.

Tyrosine-416 (Y416) is also reported as Y418 and Y419.

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**

Src (proto-oncogene tyrosine-protein kinase Src) is a protein kinase and a key regulator cell-cell interaction, cell migration, and proliferation. Elevated c-Src tyrosine kinase activity is a hallmark of many types of human cancers. Src kinase activity is regulated through phosphorylation; specifically, phosphorylation of tyrosine-416 (also reported as tyrosine-418 and 419) increases kinase activity. The antibodies for this kit were raised against a non-modified Src immunogen, as well as a phosphorylated protein fragment encompassing the 416-tyrosine site. The protein standard in this product is recombinant human Src ligated with peptide containing phosphorylated Tyrosine 416.

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**

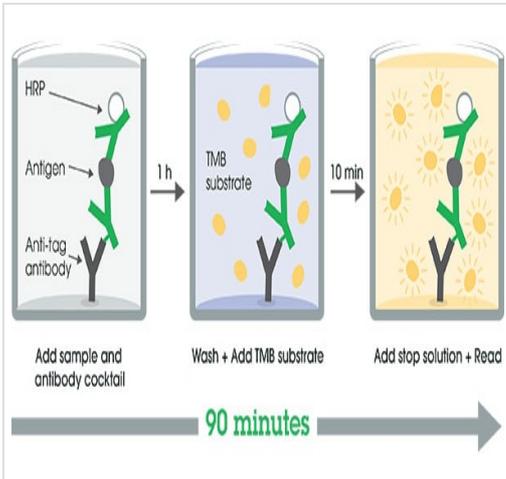
**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human Phospho-Src (Y416) Capture Antibody	1 x 600µl
10X Human Phospho-Src (Y416) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Human Phospho-Src (Y416) Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit

Components	1 x 96 tests
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

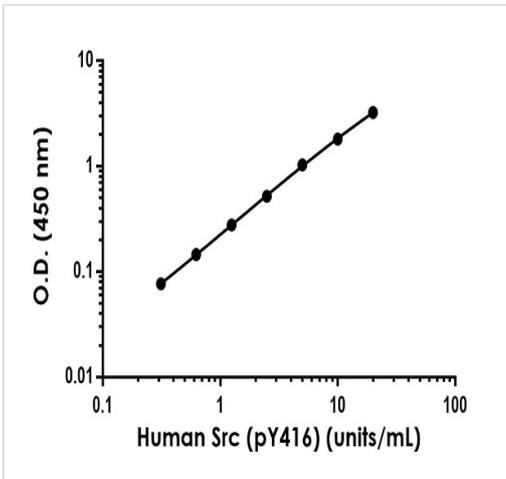
<b>Function</b>	<p>Non-receptor protein tyrosine kinase that plays pivotal roles in numerous cellular processes such as proliferation, migration, and transformation. In concert with PTK2B, plays an important role in osteoclastic bone resorption. Both the formation of a SRC-PTK2B complex, and SRC kinase activity are necessary for this function. Once it is recruited to the activated integrins, by PTK2B, it phosphorylates CBL which in turn induces the activation and recruitment of phosphatidylinositol 3-kinase to the cell membrane in a signaling pathway that is critical for osteoclast function. Promotes energy production in osteoclasts by activating mitochondrial cytochrome C oxidase. Phosphorylates RUNX3 and COX2 on tyrosine residues, TNK2 on 'Tyr-284' and CBL on 'Tyr-731'. Enhances DDX58/RIG-I-elicited antiviral signaling.</p>
<b>Sequence similarities</b>	<p>Belongs to the protein kinase superfamily. Tyr protein kinase family. SRC subfamily. Contains 1 protein kinase domain. Contains 1 SH2 domain. Contains 1 SH3 domain.</p>
<b>Post-translational modifications</b>	<p>Dephosphorylated at Tyr-530 by PTPRJ (By similarity). Phosphorylated on Tyr-530 by c-Src kinase (CSK). The phosphorylated form is termed pp60c-src. Dephosphorylated by PTPRJ at Tyr-419. Normally maintained in an inactive conformation with the SH2 domain engaged with Tyr-530, the SH3 domain engaged with the SH2-kinase linker, and Tyr-419 dephosphorylated. Dephosphorylation of Tyr-530 as a result of protein tyrosine phosphatase (PTP) action disrupts the intramolecular interaction between the SH2 domain and Tyr-530, Tyr-419 can then become autophosphorylated, resulting in SRC activation. Phosphorylation of Tyr-530 by CSK allows this interaction to reform, resulting in SRC inactivation. S-nitrosylation is important for activation of its kinase activity.</p>
<b>Cellular localization</b>	<p>Cell membrane. Mitochondrion inner membrane.</p>

## Images



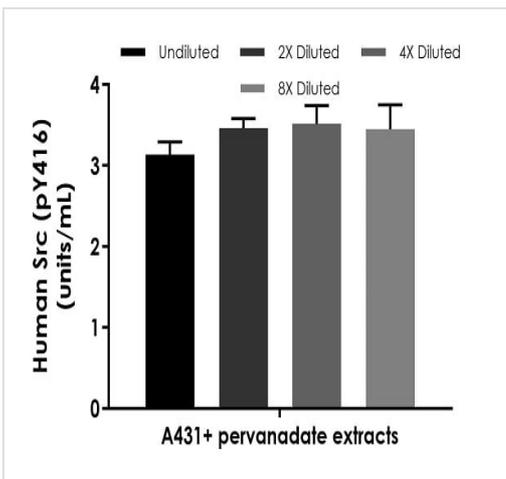
SimpleStep ELISA Protocol Diagram

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.



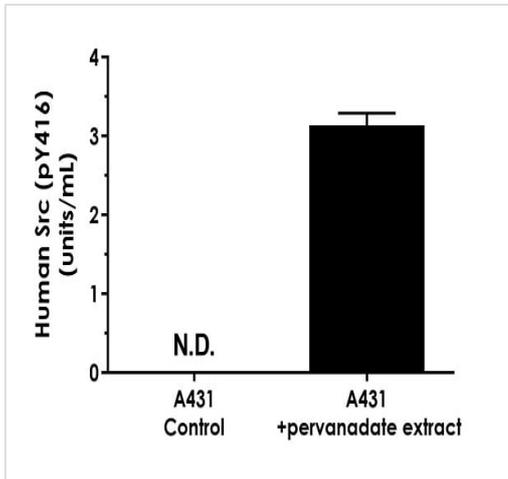
Example of human Src (pY416) standard curve in 1X Cell Extraction Buffer PTR.

The Src (pY416) standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean  $\pm$  SD) are graphed.



Interpolated concentrations of native Src (pY416) in human A431 cells treated with pervanadate, based on a 125  $\mu$ g/mL extract load.

The concentrations of Src (pY416) were measured in duplicate, interpolated from the Src (pY416) standard curve, and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Src (pY416) concentration was determined to be 3.39 units/mL.



A431 cells were treated with 10 mM pervanadate for 20 minutes, scraped and buffer exchanged into PBS + 20 mM NaF, followed by protein extraction. Mock control A431 cells accompanied cell treatment. Concentrations of Src (pY416) were measured in duplicate and interpolated against the standard curve. Results show the mean Src (pY416) concentration in control cells was not detectable, and 3.14 units/mL in pervanadate treated samples.

Comparison of native Src (pY416) concentration in treated versus control cell extracts.

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**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 Src (pY416) ELISA Kit  
(ab270886)

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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