

## Product datasheet

# Human TNFRSF14 ELISA Kit ab216950

SimpleStep ELISA<sup>®</sup>

[7 Images](#)

### Overview

**Product name** Human TNFRSF14 ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Human serum	5			2.9%

Inter-assay

Sample	n	Mean	SD	CV%
Human serum	3			4.5%

**Sample type**

Cell culture supernatant, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma

**Assay type**

Sandwich (quantitative)

**Sensitivity**

9.2 pg/ml

**Range**

31.3 pg/ml - 2000 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	107	103% - 113%
Cell culture extracts	105	100% - 109%
Tissue Extracts	105	103% - 106%
Cell culture media	116	114% - 119%
Hep Plasma	102	98% - 105%

Sample type	Average %	Range
EDTA Plasma	102	91% - 110%
Cit plasma	107	100% - 115%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Human

**Does not react with:** Cow

**Product overview**

TNFRSF14 *in vitro* SimpleStep ELISA<sup>®</sup> (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of human TNFRSF14 protein in serum, plasma, cell culture supernatant, cell and tissue extract.

The SimpleStep ELISA<sup>®</sup> employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

**Sensitivity:**

Samples in Sample Diluent NS: 13.5 pg/mL.

Samples in 1X Cell Extraction Buffer PTR: 9.2 pg/mL.

**Notes**

TNFRSF14 (also known as tumor necrosis factor receptor superfamily member 14 or Herpesvirus entry mediator or HVEM) is a cell surface receptor of the TNF-receptor superfamily. TNFRSF14 is a receptor for BTLA, LIGHT, lymphotaxin alpha. Herpesvirus glycoprotein D binds to TNFRSF14.

**Platform**

Pre-coated microplate (12 x 8 well strips)

**Properties**

**Storage instructions**

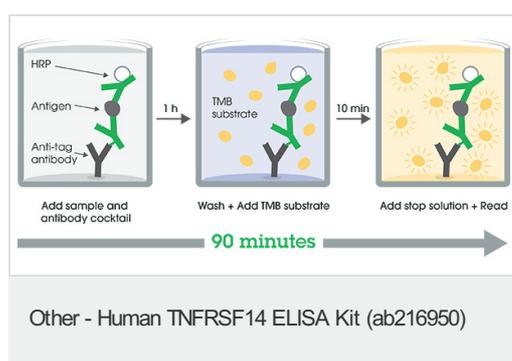
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human TNFRSF14 Capture Antibody	1 x 600µl
10X Human TNFRSF14 Detector Antibody	1 x 600µl
10X Wash Buffer PT ( <a href="#">ab206977</a> )	1 x 20ml
50X Cell Extraction Enhancer Solution ( <a href="#">ab193971</a> )	1 x 1ml

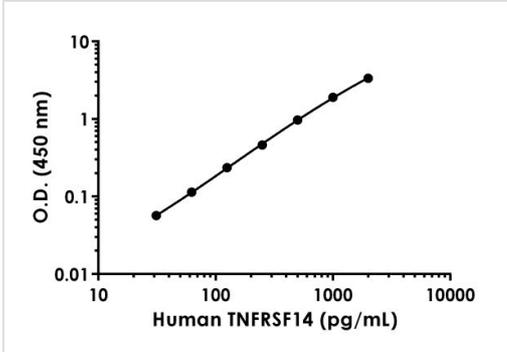
Components	1 x 96 tests
5X Cell Extraction Buffer PTR ( <a href="#">ab193970</a> )	1 x 10ml
Antibody Diluent 5BI	1 x 6ml
Human TNFRSF14 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS ( <a href="#">ab193972</a> )	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate ( <a href="#">ab206978</a> )	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

<b>Function</b>	Receptor for BTLA. Receptor for TNFSF14/LIGHT and homotrimeric TNFSF1/lymphotoxin-alpha. Involved in lymphocyte activation. Plays an important role in HSV pathogenesis because it enhanced the entry of several wild-type HSV strains of both serotypes into CHO cells, and mediated HSV entry into activated human T-cells.
<b>Tissue specificity</b>	Widely expressed, with the highest expression in lung, spleen and thymus.
<b>Sequence similarities</b>	Contains 3 TNFR-Cys repeats.
<b>Post-translational modifications</b>	N-glycosylated.
<b>Cellular localization</b>	Membrane.

## Images

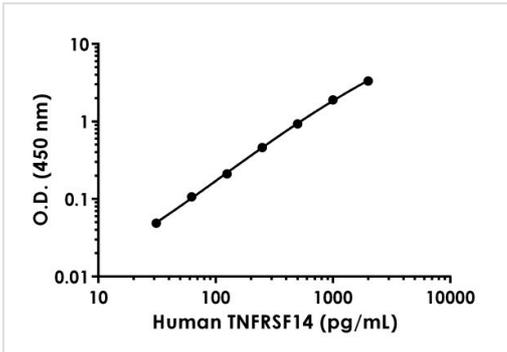


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



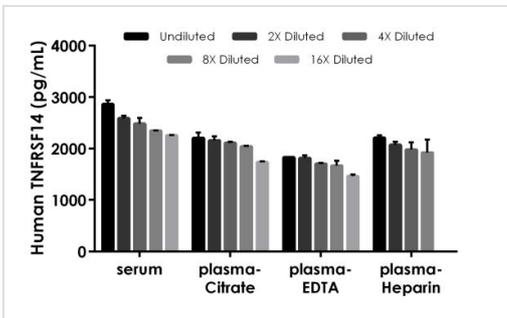
Example of human TNFRSF14 standard curve in Sample Diluent NS.

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



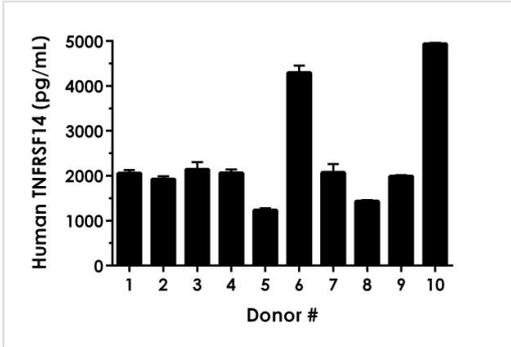
Example of human TNFRSF14 standard curve in 1X Cell Extraction Buffer PTR.

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



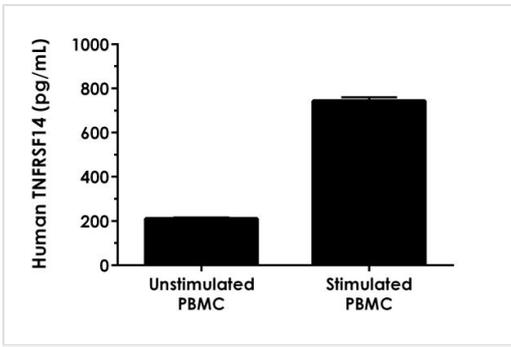
Interpolated concentrations of native TNFRSF14 in human serum and plasma samples.

The concentrations of TNFRSF14 were measured in duplicates, interpolated from the TNFRSF14 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TNFRSF14 concentration was determined to be 2,507 pg/mL in serum, 2,050 pg/mL in plasma (citrate) and 1,696 pg/mL in plasma (EDTA) and 2,044 pg/mL in plasma (heparin).



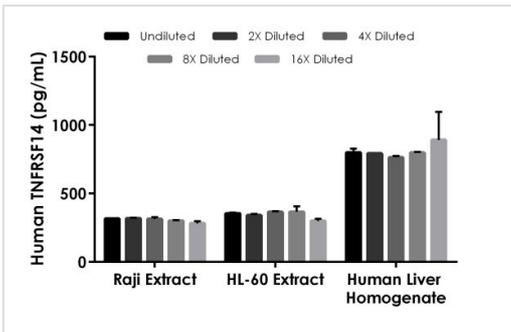
Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TNFRSF14 concentration was determined to be 2413 pg/mL with a range of 1201 – 4953 pg/mL.



Comparison of secreted TNFSF14 in unstimulated and PMA/PHA-stimulated Peripheral Blood Monocyte (PBMC) Cells.

PBMC cells were grown in the absence (unstimulated) or presence of Phorbol Myristate Acetate (PMA) and phytohemagglutinin (PHA) (stimulated) for 3 days. TNFRSF14 was measured in 2-fold diluted cell culture supernatants of unstimulated and PMA/PHA stimulated PBMC and cell culture media. Measured values were interpolated from the TNFRSF14 Standard Curve diluted in Sample Diluent NS and corrected for dilution factor. Mean of duplicate values +/-SD are graphed: 211 pg/mL in unstimulated, 744 pg/mL in stimulated, and undetectable in media.



Interpolated concentrations of native TNFRSF14 in human Raji and HL-60 cell extracts and human liver homogenate tissue extract samples.

Samples based on a 400 µg/mL extract load. The concentrations of TNFRSF14 were measured in duplicate and interpolated from the TNFRSF14 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TNFRSF14 concentration was determined to be 306 pg/mL in Raji Extract, 345 pg/mL in HL-60 extract, and 809 pg/mL in Human Liver Homogenate Extract.

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