

Human Thrombopoietin ELISA Kit ab219632

Recombinant SimpleStep ELISA[®]

[1 References](#) [9 Images](#)

Overview

Product name Human Thrombopoietin ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	3			5.1%

Inter-assay

Sample	n	Mean	SD	CV%
Seum	5			5%

Sample type

Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

11 pg/ml

Range

62.5 pg/ml - 4000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	83	81% - 84%
Cell culture media	89	84% - 84%
Hep Plasma	98	97% - 100%
EDTA Plasma	101	96% - 109%
Cit plasma	84	80% - 90%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity**Reacts with:** Human**Product overview**

Human Thrombopoietin ELISA Kit (ab219632) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Thrombopoietin protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Thrombopoietin with 11 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

Thrombopoietin is a lineage-specific cytokine affecting the proliferation and maturation of megakaryocytes from their committed progenitor cells. Thrombopoietin acts at a late stage of megakaryocyte development.

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 Thrombopoietin Capture Antibody	1 x 600µl
10X Human Thrombopoietin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human Thrombopoietin Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent 25BP	1 x 20ml
Sample Diluent NS (ab193972)	2 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

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

Function

Lineage-specific cytokine affecting the proliferation and maturation of megakaryocytes from their committed progenitor cells. It acts at a late stage of megakaryocyte development. It may be the major physiological regulator of circulating platelets.

Involvement in disease

Defects in THPO are a cause of essential thrombocythemia (ET) [MIM:187950]. ET is inherited as an autosomal dominant trait which is characterized by elevated platelet levels due to sustained proliferation of megakaryocytes, and frequently lead to thrombotic and haemorrhagic complications.

Sequence similarities

Belongs to the EPO/TPO family.

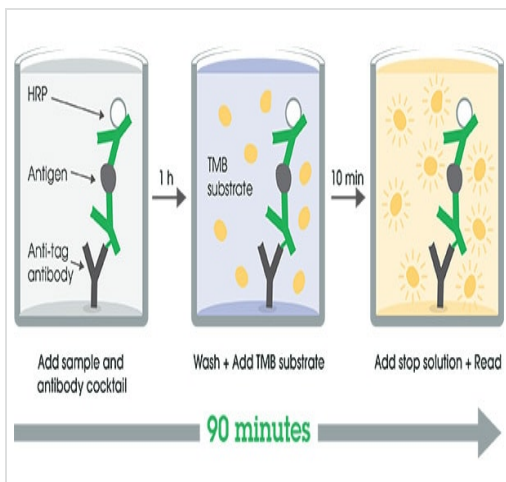
Domain

Two-domain structure with an erythropoietin-like N-terminal and a Ser/Pro/Thr-rich C-terminal.

Cellular localization

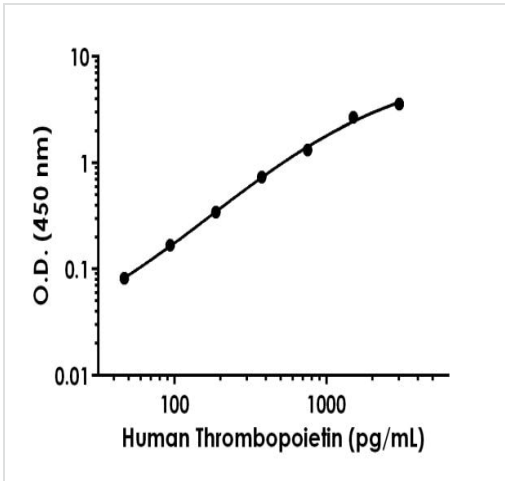
Secreted.

Images



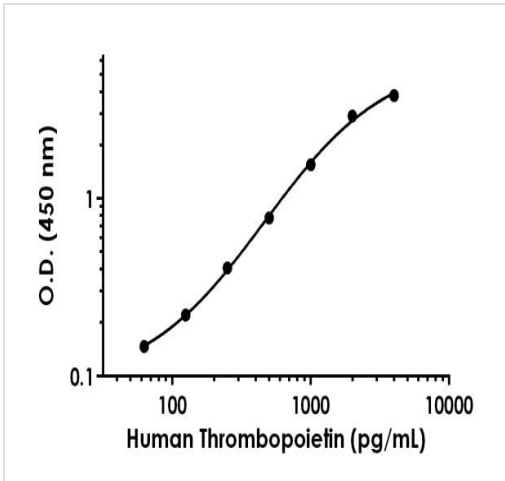
SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Other - Human Thrombopoietin ELISA Kit
(ab219632)



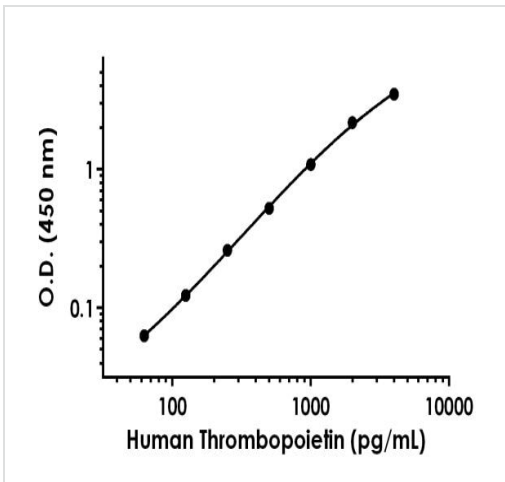
Background-subtracted data values (mean +/- SD) are graphed.

Example of human Thrombopoietin standard curve in Sample Diluent NS.



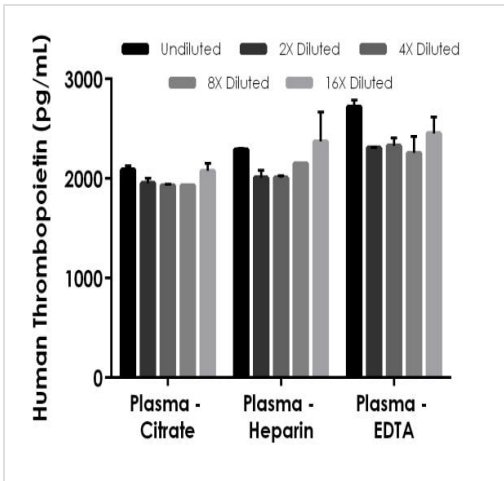
Background-subtracted data values (mean +/- SD) are graphed.

Example of human Thrombopoietin standard curve in Sample Diluent 10BP.



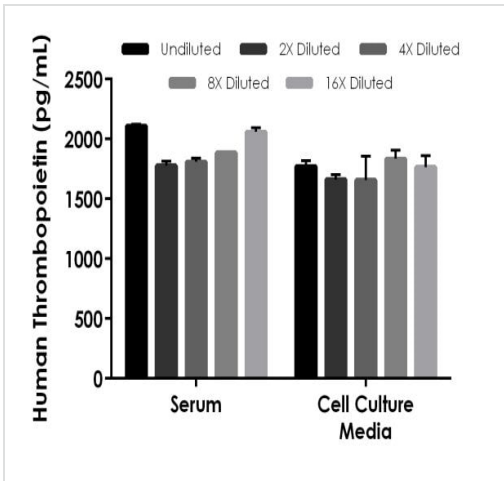
Background-subtracted data values (mean +/- SD) are graphed.

Example of human Thrombopoietin standard curve in Sample Diluent 25BP.



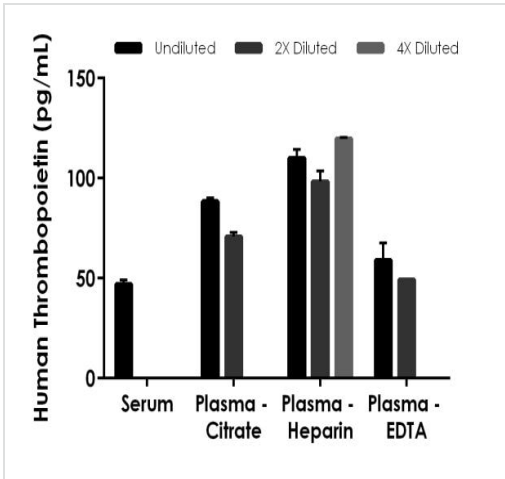
Interpolated concentrations of spike Thrombopoietin in human plasma samples.

The concentrations of Thrombopoietin were measured in duplicates, interpolated from the Thrombopoietin standard curves and corrected for sample dilution. Undiluted samples are as follows: plasma (citrate) neat, plasma (heparin) neat, plasma (EDTA) neat. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



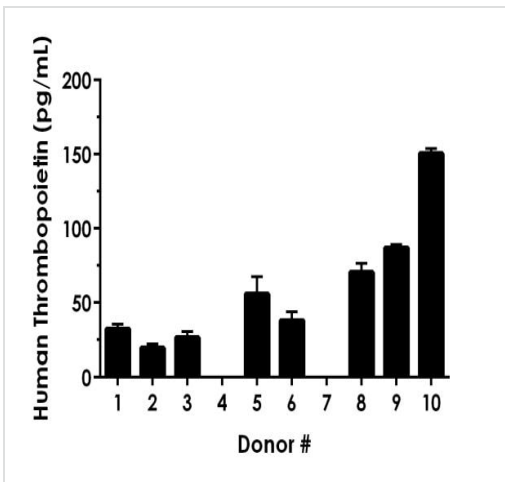
Interpolated concentrations of spike Thrombopoietin in human serum and cell culture media (DMEM + 10% FBS) samples.

The concentrations of Thrombopoietin were measured in duplicates, interpolated from the Thrombopoietin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum neat, cell culture media neat. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



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

The concentrations of Thrombopoietin were measured in duplicates, interpolated from the Thrombopoietin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum neat, plasma (citrate) neat, plasma (heparin) neat, plasma (EDTA) neat. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean of detectable Thrombopoietin concentration was determined to be 47.1 pg/mL in neat serum, 79.6 pg/mL in neat plasma (citrate), 109 pg/mL in plasma (heparin), and 54.1 pg/mL in plasma (EDTA). Detectable concentrations are defined as concentrations above the minimum detectable dose (MDD) concentration.



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

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean of detectable Thrombopoietin concentration was determined to be 60.1 pg/mL with a range of 19.6 – 151 pg/mL. Detectable concentrations are defined as concentrations above the minimum detectable dose (MDD) concentration.

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

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

Sandwich ELISA - Human Thrombopoietin ELISA Kit (ab219632)

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