

Human AST ELISA Kit (Aspartate Aminotransferase) ab263881

Recombinant SimpleStep ELISA

[1 References](#) [13 Images](#)

Overview

Product name Human AST ELISA Kit (Aspartate Aminotransferase)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			4.2%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			1.8%

Sample type

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

Assay type

Sandwich (quantitative)

Sensitivity

43 pg/ml

Range

312.5 pg/ml - 20000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	93	81% - 109%
Serum	101	95% - 114%
Cell culture extracts	92	88% - 94%
Tissue Extracts	99	97% - 103%
Hep Plasma	103	101% - 104%

Sample type	Average %	Range
EDTA Plasma	93	91% - 96%
Cit plasma	93	89% - 97%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Product overview

Human AST ELISA Kit (Aspartate Aminotransferase) (ab263881) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of AST (Aspartate Aminotransferase) protein in cell extracts, tissue extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human AST (Aspartate Aminotransferase) with 43 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

Cytoplasmic aspartate aminotransaminase (AST), is a key enzyme in the regulation of glutamate levels. It catalyzes the reversible transfer of an α -amino group between aspartate and glutamate. Given its central role in amino acid metabolism, it plays a critical role in many biological functions. In a clinical context, AST levels in the serum are used as a marker for liver health. This kit targets the full-length protein.

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

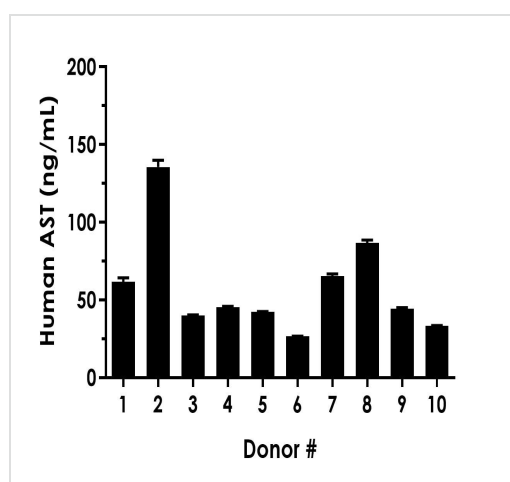
Storage instructions

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

Components	1 x 96 tests
10X Human AST (Aspartate Aminotransferase) Capture Antibody	1 x 600µl
10X Human AST (Aspartate Aminotransferase) 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 AST (Aspartate Aminotransferase) Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent 25BS	1 x 20ml
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

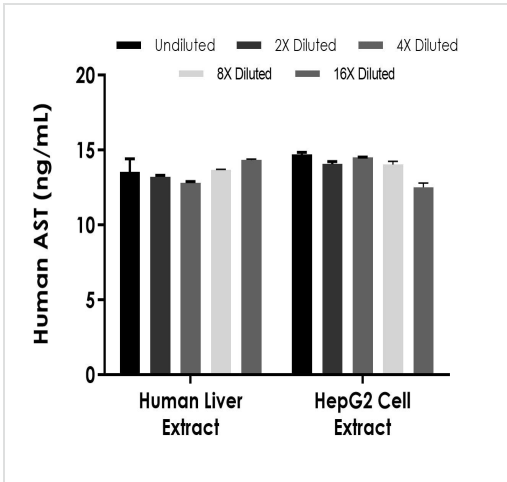
Function	Plays a key role in amino acid metabolism.
Sequence similarities	Belongs to the class-I pyridoxal-phosphate-dependent aminotransferase family.
Cellular localization	Cytoplasm.

Images



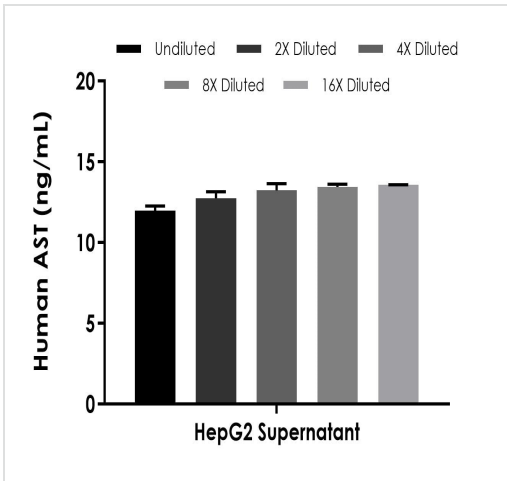
Interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean AST concentration was determined to be 58 ng/mL with a range of 27 – 136 ng/mL.

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



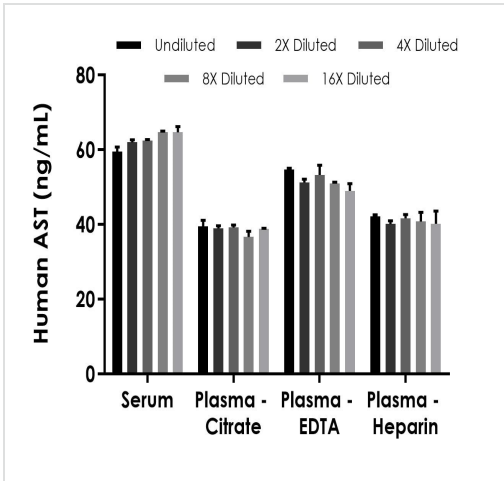
Interpolated concentrations of native AST in human liver extract and HepG2 cell extract samples based on 10 and 75 µg/mL extract loads, respectively.

The concentrations of AST were measured in duplicate and interpolated from the AST standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 14 ng/mL in human liver extract and 14 ng/mL in HepG2 cell extract.



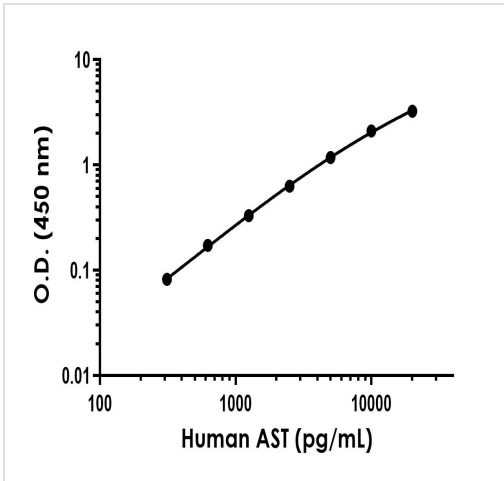
Interpolated concentrations of native AST in HepG2 cell culture supernatant samples

The concentrations of AST were measured in duplicates, interpolated from the AST standard curves and corrected for sample dilution. Undiluted samples are as follows: HepG2 cell culture supernatant 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 13 ng/mL in HepG2 cell culture supernatant.



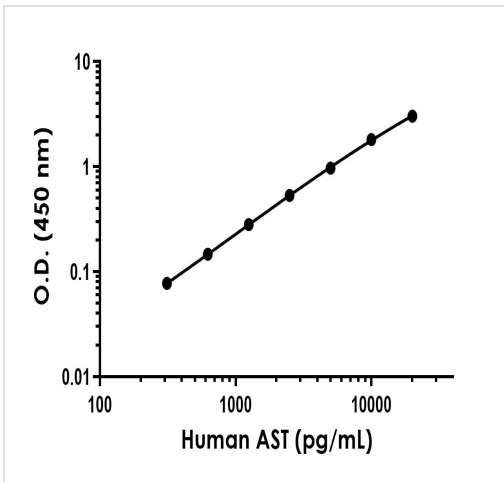
Interpolated concentrations of native AST in human serum and plasma samples.

The concentrations of AST were measured in duplicates, interpolated from the AST standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 25%, plasma (EDTA) 25%, and plasma (heparin) 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 63 ng/mL in serum, 39 ng/mL in plasma (citrate), 52 ng/mL in plasma (EDTA), and 41 ng/mL in plasma (heparin).



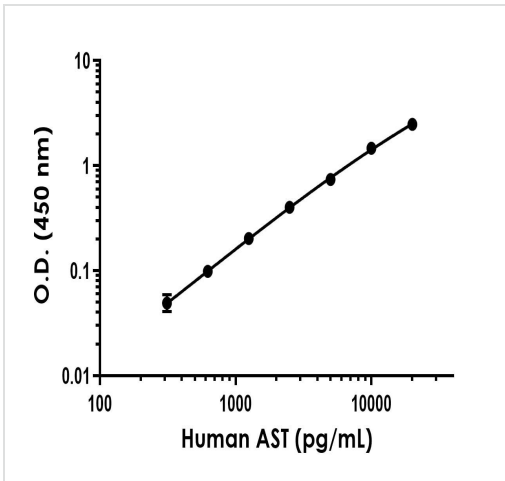
Example of human AST standard curve in 1X Cell Extraction Buffer PTR.

The AST standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



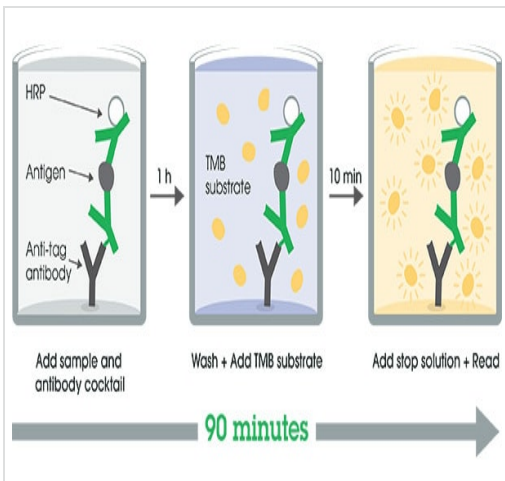
Example of human AST standard curve in Sample Diluent NS.

The AST standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



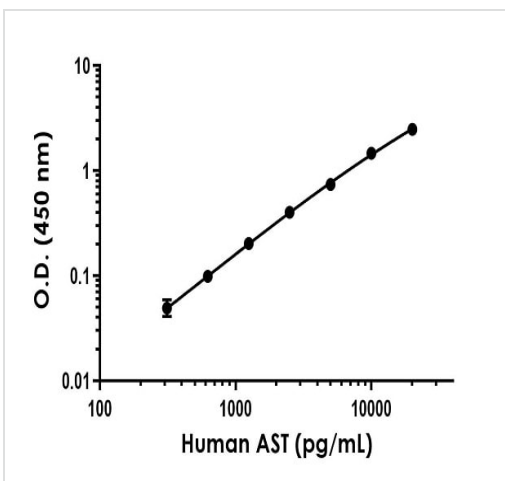
Example of human AST standard curve in Sample Diluent 25BS.

The AST standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



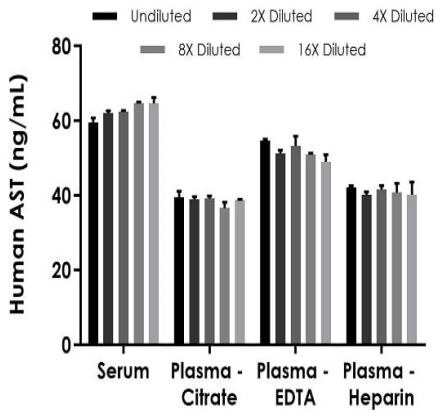
SimpleStep ELISA Protocol Diagram

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.



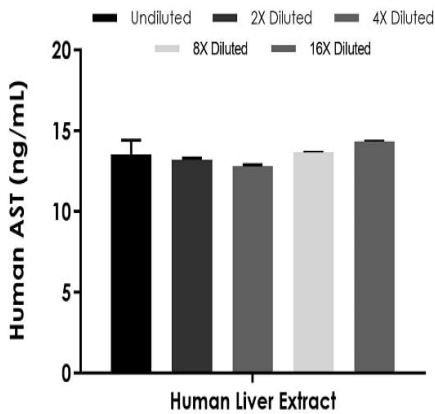
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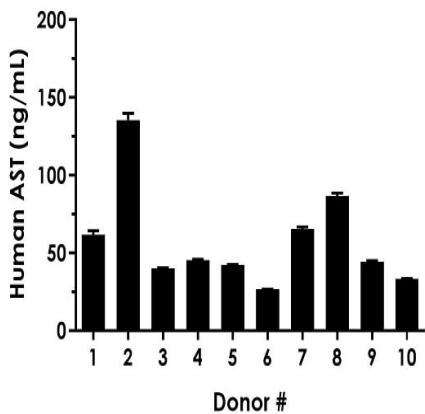
Interpolated concentrations of native AST in human serum and plasma samples.

The concentrations of AST were measured in duplicates, interpolated from the AST standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 25%, plasma (EDTA) 25%, and plasma (heparin) 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 62.7 ng/mL in serum, 38.7 ng/mL in plasma (citrate), 51.9 ng/mL in plasma (EDTA), and 41.0 ng/mL in plasma (heparin).



Interpolated concentrations of native AST in human liver extract based on a 10 µg/mL extract load.

The concentrations of AST were measured in duplicate and interpolated from the AST standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 13.5 ng/mL in human liver extract.



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

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AST concentration was determined to be 58.1 ng/mL with a range of 26.6 – 135.6 ng/mL.

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recombinant antibodies



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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 AST ELISA Kit (Aspartate Aminotransferase) (ab263881)

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

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