

Product datasheet

Human Sorbitol Dehydrogenase ELISA Kit ab233613

Recombinant SimpleStep ELISA

[8 Images](#)

Overview

Product name Human Sorbitol Dehydrogenase ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Jurkat cells	5			2.3%

Inter-assay

Sample	n	Mean	SD	CV%
Jurkat cells	3			7.9%

Sample type Urine, Serum, Cell culture extracts, Tissue Extracts, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 60 pg/ml

Range 0.39 ng/ml - 25 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	107	102% - 113%
Serum	95	92% - 97%
Cell culture extracts	99	89% - 109%
Tissue Culture Media	103	92% - 114%
Cit plasma	86	81% - 90%

Assay time 1h 30m

Assay duration One step assay

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

Human Sorbitol Dehydrogenase ELISA Kit (ab233613) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Sorbitol Dehydrogenase protein in cit plasma, serum, tissue extracts, urine, and cell culture extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Sorbitol Dehydrogenase with 60 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

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 Sorbitol Dehydrogenase Capture Antibody	1 x 600µl
10X Human Sorbitol Dehydrogenase Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml
Human Sorbitol Dehydrogenase Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function

Converts sorbitol to fructose. Part of the polyol pathway that plays an important role in sperm physiology. May play a role in the sperm motility by providing an energetic source for sperm.

Tissue specificity

Expressed in kidney and epithelial cells of both benign and malignant prostate tissue. Expressed in epididymis (at protein level).

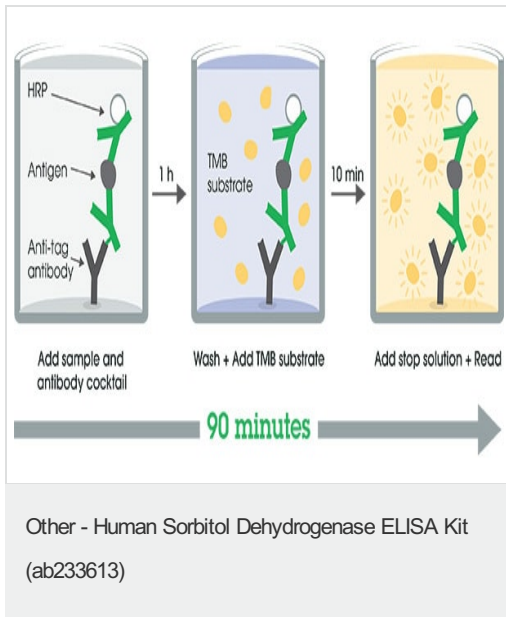
Sequence similarities

Belongs to the zinc-containing alcohol dehydrogenase family.

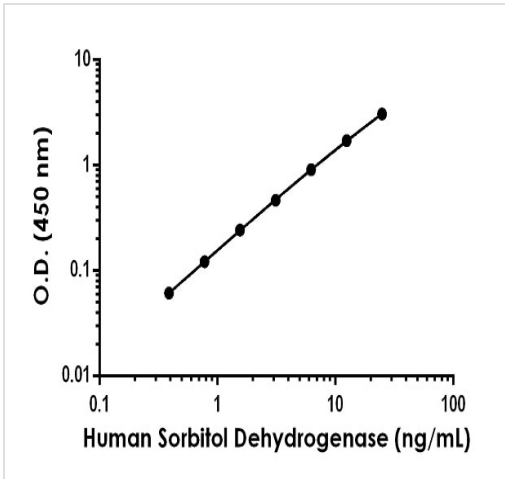
Cellular localization

Mitochondrion membrane. Cell projection > cilium > flagellum. Associated with mitochondria of the midpiece and near the plasma membrane in the principal piece of the flagellum. Also found in the epididymosome, secreted by the epididymal epithelium and that transfers proteins from the epididymal fluid to the sperm surface.

Images

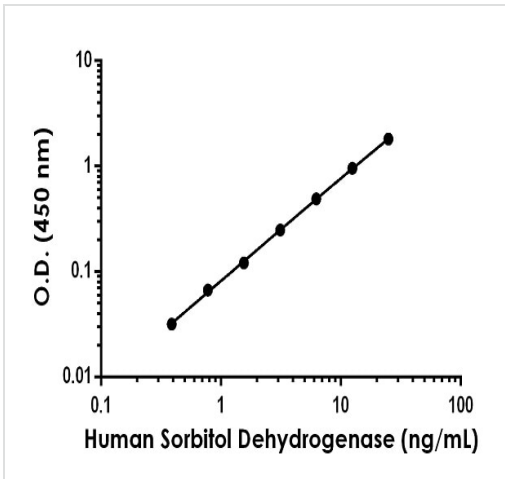


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



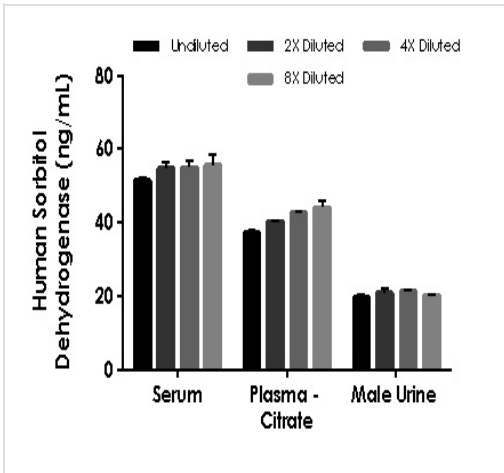
Example of human Sorbitol Dehydrogenase standard curve in Sample Diluent NS.

The Sorbitol Dehydrogenase 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.



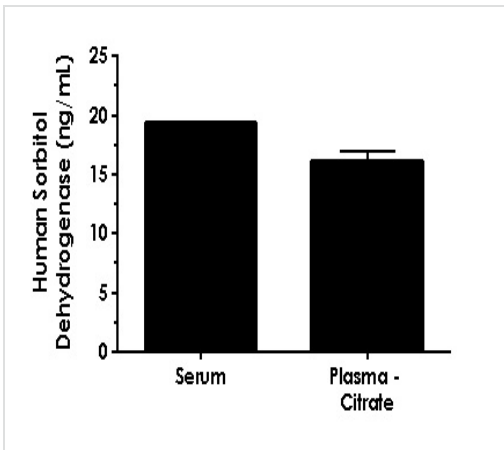
Example of human Sorbitol Dehydrogenase standard curve in 1X Cell Extraction Buffer.

The Sorbitol Dehydrogenase 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.



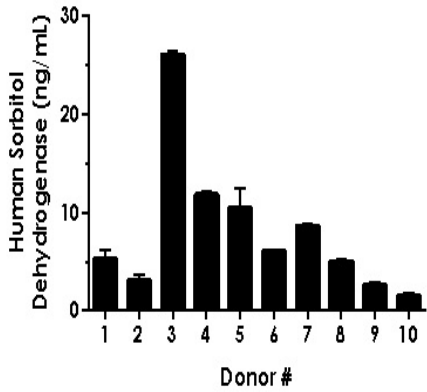
Interpolated concentrations of spiked Sorbitol Dehydrogenase in human serum, plasma and urine samples.

The concentrations of Sorbitol Dehydrogenase were measured in duplicates, interpolated from the Sorbitol Dehydrogenase standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 10%, plasma (citrate) 25%, and urine 12.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



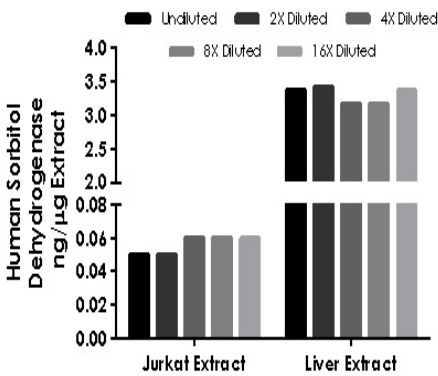
Interpolated concentrations of native Sorbitol Dehydrogenase in human serum, and plasma samples.

The concentrations of Sorbitol Dehydrogenase were measured in duplicates, interpolated from the Sorbitol Dehydrogenase standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 12.5%, and plasma (citrate) 12.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Sorbitol Dehydrogenase concentration was determined to be 19 ng/mL in serum and 16 ng/mL in plasma(citrate).



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

Interpolated concentrations of native Sorbitol Dehydrogenase in human Jurkat cell extract and human liver tissue extract samples.



Interpolated concentrations of native Sorbitol Dehydrogenase in human Jurkat cell extract and human liver tissue extract samples.

The concentrations of Sorbitol Dehydrogenase were measured in duplicate and interpolated from the Sorbitol Dehydrogenase standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean Sorbitol Dehydrogenase concentration was determined to be 0.06 ng/μg in Jurkat cell extract and 3.3 ng/μg in liver tissue extract.

Powered by
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 Sorbitol Dehydrogenase
ELISA Kit (ab233613)

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

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