

Human D-Dimer ELISA Kit ab260076

SimpleStep ELISA

[7 References](#) [7 Images](#)

Overview

Product name Human D-Dimer ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			4.4%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			4.3%

Sample type

Urine, Serum, Cell culture media, Hep Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

2.36 ng/ml

Range

4.69 ng/ml - 300 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	101	99% - 103%
Serum	107	96% - 124%
Tissue Culture Media	83	81% - 84%
Hep Plasma	101	99% - 103%
Cit plasma	98	95% - 105%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Does not react with: Cow

Product overview

Human D-Dimer ELISA Kit (ab260076) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of D-Dimer protein in hep plasma, serum, urine, cell culture media, and cit plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human D-Dimer with 2.36 ng/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.

Plasma collected with EDTA is not compatible with this kit.

ASSAY SPECIFICITY

This kit recognizes native human D-Dimer protein in serum, plasma (citrate), plasma (heparin), cell and tissue culture supernatant, and urine samples only.

Cell and tissue extract samples have not been tested with this kit.

CROSS REACTIVITY

Recombinant human fibrinogen, plasminogen, angiostatin, tPA, PAI1, and plasmin were prepared at 150 ng/mL, diluted serially, and assayed for cross reactivity. No cross-reactivity was observed.

INTERFERENCE

Recombinant human fibrinogen, plasminogen, angiostatin, tPA, PAI1, and plasmin were prepared at 150 ng/mL, diluted serially, and assayed for interference with human D-Dimer. No cross-reactivity was observed.

SPECIES REACTIVITY

This kit recognizes human D-Dimer protein.

Other species reactivity was determined by measuring 1: 200 mouse, rat, and bovine serum samples, interpolating the D-Dimer protein concentrations from the human standard curve, and expressing the interpolated concentrations as a percentage of the D-Dimer protein concentration in human serum assayed at the same dilution.

Reactivity < 3% was determined for the following species: Mouse, Rat, Cow

Notes D-dimer is a protein formed by the cross-linking of two D fragments of the fibrin protein. D-dimer is one of several fibrin degradation products (FDPs) formed by the degradation of a blood clot by fibrinolysis. Its measurement is used to diagnose the blood disorder disseminated intravascular coagulation and in the diagnosis of thrombosis

Platform Pre-coated microplate (12 x 8 well strips)

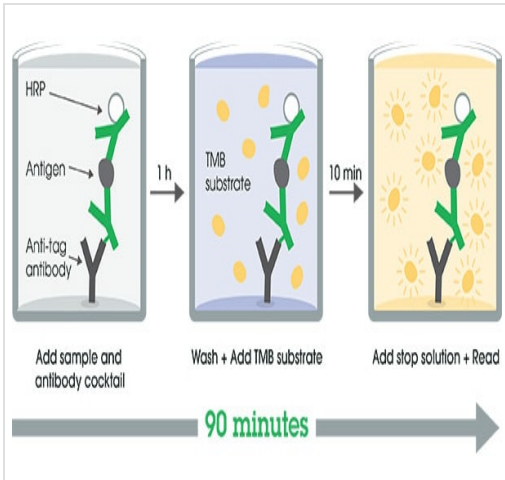
Properties

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

Components	1 x 96 tests
10X Human D-Dimer Capture Antibody	1 x 600µl
10X Human D-Dimer Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Human D-Dimer Lyophilized Purified Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

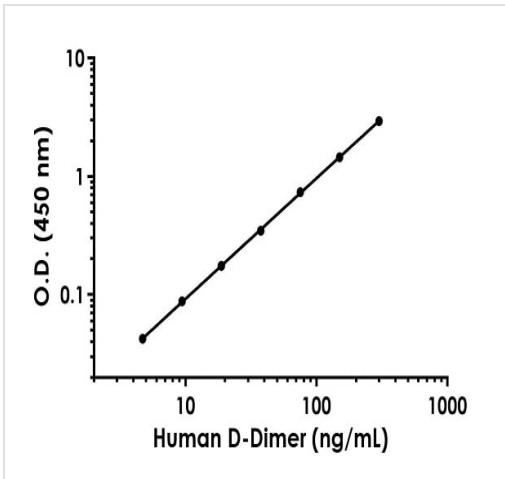
Relevance A fibrin degradation fragment or product that is produced by the action of plasmin on fibrin in the clot dissolution process.

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.



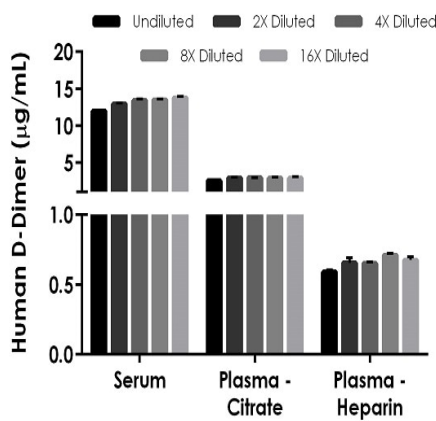
Example of human D-Dimer standard curve in Sample Diluent NS.

The D-Dimer 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.

Standard Curve Measurements			
Concentration (ng/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.057	0.051	0.054
4.69	0.094	0.096	0.095
9.38	0.146	0.136	0.141
18.75	0.226	0.230	0.228
37.50	0.397	0.405	0.401
75	0.785	0.796	0.791
150	1.533	1.474	1.503
300	2.962	3.023	2.992

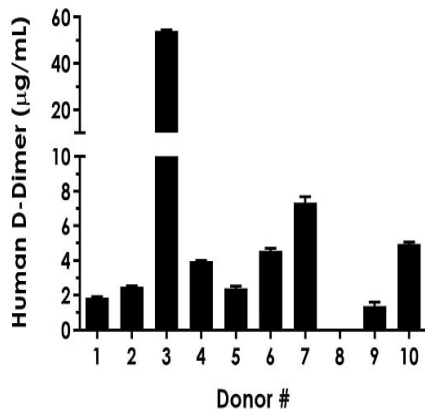
Example of human D-Dimer standard curve in Sample Diluent NS.

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



Interpolated concentrations of native D-Dimer in human serum, plasma (citrate), and plasma (heparin) samples.

The concentrations of D-Dimer were measured in duplicates, interpolated from the D-Dimer standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1%, plasma (citrate) 10%, and plasma (heparin) 12.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean D-Dimer concentration was determined to be 13.13 µg/mL in serum, 2.79 µg/mL in plasma (citrate), and 0.66 µg/ml (656.15 ng/mL) in plasma (heparin).



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

One donor sample measured below the range of the assay. Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean D-Dimer concentration was determined to be 9.46 µg/mL with a range of ND – 54.04 µg/mL.

Dilution Factor	Interpolated value	1% Human Serum	10% Human Plasma (Citrate)	12.50% Human Plasma (Heparin)
Undiluted	ng/mL	120	254	74
	% Expected value	100	100	100
2	ng/mL	65	144	41
	% Expected value	108	114	111
4	ng/mL	34	73	20
	% Expected value	112	115	111
8	ng/mL	17	36	11
	% Expected value	113	113	121
16	ng/mL	9	18	5
	% Expected value	115	113	115

Linearity of dilution.

Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

Native D-Dimer was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS.

Dilution Factor	Interpolated value	50% Cell culture media	50% Human pooled urine
Undiluted	ng/mL	128	120
	% Expected value	100	100
2	ng/mL	68	66
	% Expected value	107	111
4	ng/mL	36	35
	% Expected value	111	116
8	ng/mL	18	18
	% Expected value	114	119
16	ng/mL	10	8
	% Expected value	122	112

Linearity of dilution.

Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

D-Dimer was spiked into the following biological samples and diluted in a 2-fold dilution series in Sample Diluent NS.

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