

Product datasheet

Human Mesothelin ELISA Kit ab216168

SimpleStep ELISA[®]

[4 Images](#)

Overview

Product name	Human Mesothelin ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Serum	8			3.7%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Serum	3			3.3%
Sample type	Cell culture supernatant, Saliva, Urine, Serum, Hep Plasma, EDTA Plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	132.5 pg/ml				
Range	0.39 ng/ml - 25 ng/ml				
Recovery	Sample specific recovery				
	Sample type	Average %	Range		
	Cell culture supernatant	95	92% - 97%		
	Saliva	104	100% - 107%		
	Urine	87	85% - 89%		
	Serum	89	84% - 95%		
	Hep Plasma	84	81% - 87%		
	EDTA Plasma	98	88% - 111%		

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	Reacts with: Human Does not react with: Cow
Product overview	Mesothelin <i>in vitro</i> SimpleStep ELISA [®] (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Mesothelin protein in human serum, plasma, cell culture supernatant, urine and saliva.

The SimpleStep ELISA[®] 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.

Notes Mesothelin is a 40 kDa GPI-anchored cell surface protein found on mesothelial cells and overexpressed in several types of cancer. The gene that encodes mesothelin is spliced into two different gene products, mesothelin and megakaryocyte potentiation factor. Mesothelin is involved in cellular adhesion, but is also secreted and normally found in several biological fluids.

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

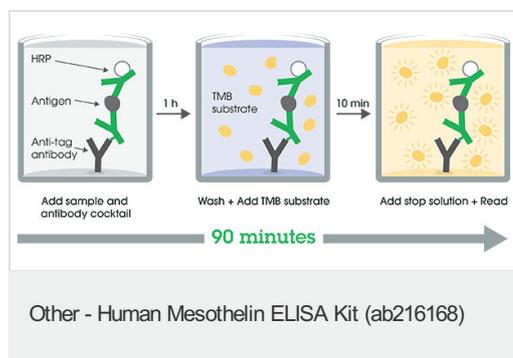
Properties

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

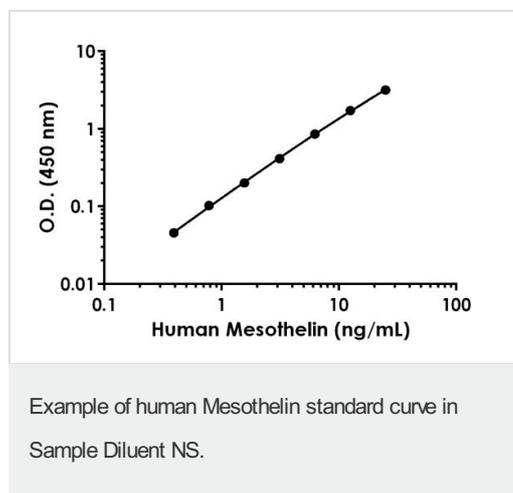
Components	1 x 96 tests
10X Human Mesothelin Capture Antibody	1 x 600µl
10X Human Mesothelin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Human Mesothelin Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml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

Function	Membrane-anchored forms may play a role in cellular adhesion. Megakaryocyte-potentiating factor (MPF) potentiates megakaryocyte colony formation in vitro.
Tissue specificity	Expressed in lung. Expressed at low levels in heart, placenta and kidney. Expressed in mesothelial cells. Highly expressed in mesotheliomas, ovarian cancers, and some squamous cell carcinomas (at protein level).
Involvement in disease	Note=Antibodies against MSLN are detected in patients with mesothelioma and ovarian cancer.
Sequence similarities	Belongs to the mesothelin family.
Post-translational modifications	Both MPF and the cleaved form of mesothelin are N-glycosylated. Proteolytically cleaved by a furin-like convertase to generate megakaryocyte-potentiating factor (MPF), and the cleaved form of mesothelin.
Cellular localization	Secreted and Cell membrane. Golgi apparatus.

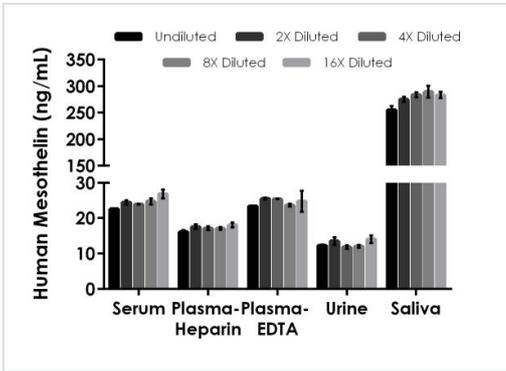
Images



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.

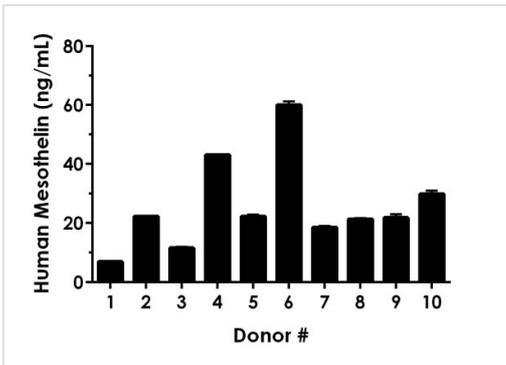


Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native Mesothelin in human serum, plasma, urine and saliva samples.

The concentrations of Mesothelin were measured in duplicates, interpolated from the Mesothelin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (heparin) 37.5%, plasma (EDTA) 37.5%, urine 50% and saliva 5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Mesothelin concentration was determined to be 24.50 ng/mL in serum, 17.17 ng/mL in plasma (heparin), 24.54 ng/mL in plasma (EDTA), 12.37 ng/mL in urine and 277.2 ng/mL in saliva.



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 Mesothelin concentration was determined to be 25.79 ng/mL with a range of 6.86 – 60.93 ng/mL.

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