

Product datasheet

Mouse HGF ELISA Kit ab223862

SimpleStep ELISA[®]

[9 Images](#)

Overview

Product name Mouse HGF ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			3.2%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			4.9%

Sample type

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

Assay type

Sandwich (quantitative)

Sensitivity

8.4 pg/ml

Range

62.5 pg/ml - 4000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	111	109% - 117%
Cell culture extracts	104	101% - 107%
Tissue Extracts	119	113% - 123%
Cell culture media	109	107% - 112%
EDTA Plasma	104	100% - 108%
Cit plasma	108	105% - 111%

Assay time 1h 30m
Assay duration One step assay
Species reactivity **Reacts with:** Mouse

Product overview HGF *in vitro* SimpleStep ELISA[®] (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of HGF protein in mouse serum, plasma, cell culture supernatant, cell and tissue extract samples.

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.

Hepatocyte Growth Factor (HGF) is mitogen of parenchymal hepatocytes. HGF also acts as a growth factor and is expressed by a wide variety of tissue and cell types. HGF binds to the HGF-Receptor to help regulate cell growth, cell motility and morphogenesis. Elevated circulating levels of HGF can be measured as prognostic marker of severity of hypertension and heart failure. HGF is secreted as a full length inactive polypeptide, and then is cleaved by serine proteases into a 69-kDa alpha-chain and 34-kDa beta chain which dimerize producing the active heterodimeric molecule. Mouse HGF SimpleStep ELISA[®] (ab223862) is designed to recognize this dimerized protein.

The calculated minimal detectable dose (MDD) is 8.4 pg/mL in Sample Diluent NS.

The calculated minimal detectable dose (MDD) is 11 pg/mL in 1X Cell Extraction Buffer PTR.

Platform Microplate (12 x 8 well strips)

Properties

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

Components	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 12ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPR	1 x 6ml
10X Mouse HGF Capture Antibody	1 x 600µl

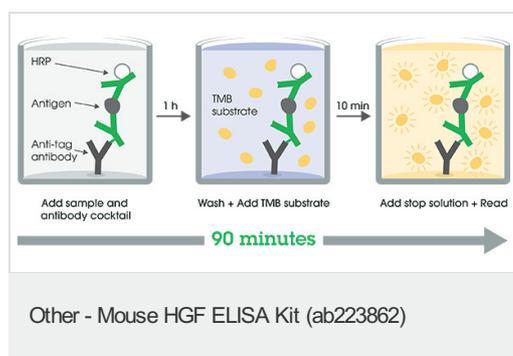
Components	1 x 96 tests
10X Mouse HGF Detector Antibody	1 x 600µl
Mouse HGF Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function Potent mitogen for mature parenchymal hepatocyte cells, seems to be a hepatotrophic factor, and acts as a growth factor for a broad spectrum of tissues and cell types. Activating ligand for the receptor tyrosine kinase MET by binding to it and promoting its dimerization.

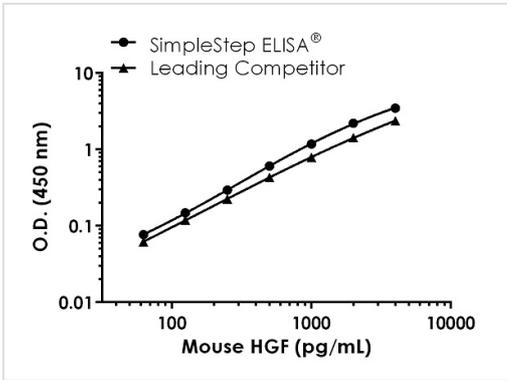
Involvement in disease Deafness, autosomal recessive, 39

Sequence similarities Belongs to the peptidase S1 family. Plasminogen subfamily.
Contains 4 kringle domains.
Contains 1 PAN domain.
Contains 1 peptidase S1 domain.

Images

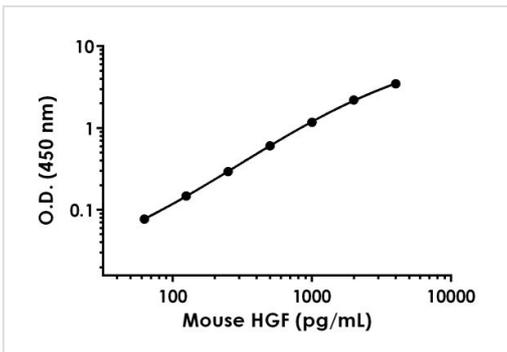


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



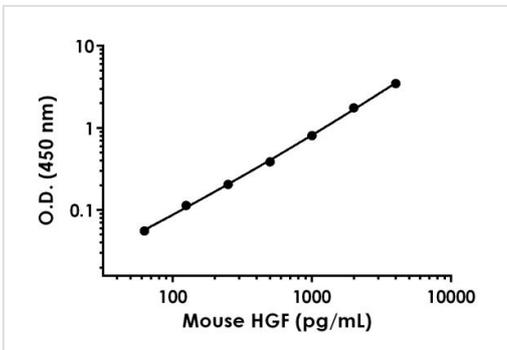
Mouse HGF standard curve comparison data

Standard curve comparison between mouse HGF SimpleStep ELISA[®] kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows comparable sensitivity.



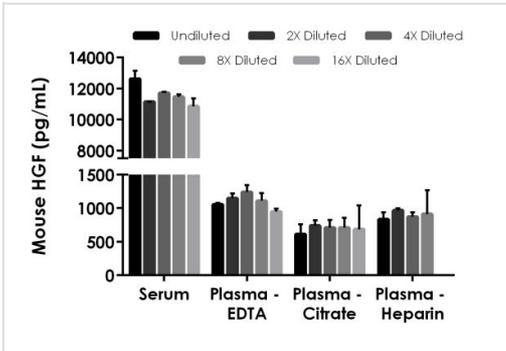
Example of mouse HGF standard curve in Sample Diluent NS

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



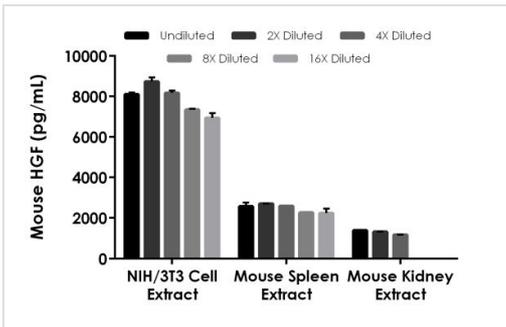
Example of mouse HGF standard curve in 1X Cell Extraction Buffer PTR

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



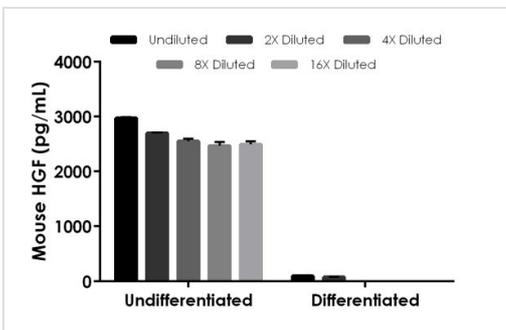
Interpolated concentrations of native HGF in mouse serum and plasma samples

The concentrations of HGF were measured in duplicates, interpolated from the HGF standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 20%, plasma (EDTA) 50%, plasma (citrate) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean HGF concentration was determined to be 11,764 pg/mL in serum, 1099 pg/mL in plasma (EDTA), 691 pg/mL in plasma (citrate) and 896 pg/mL in plasma heparin).



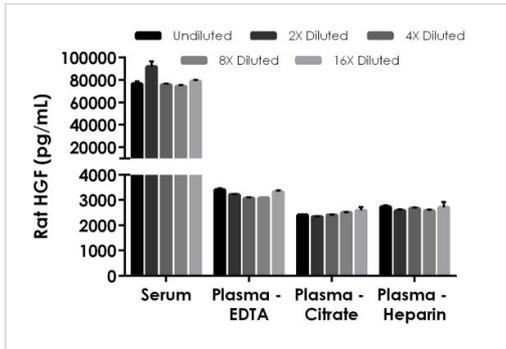
Interpolated concentrations of native HGF in mouse cell and tissue extracts, extracts based on a 4,000 µg/mL extract load

The concentrations of HGF were measured in duplicate and interpolated from the HGF standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean HGF concentration was determined to be 7,859 pg/mL in NIH/3T3 cell extract, 2,472 pg/mL in mouse spleen tissue extract and 1,291 pg/mL in mouse kidney tissue extract.



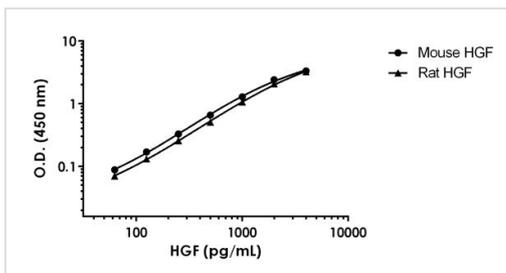
Interpolated concentrations of native HGF in mouse 3T3-L1 undifferentiated and 3T3-L1 adipocyte differentiated cell extract samples, sample based on a 1,000 µg/mL extract load

Mouse 3T3-L1 cells were either undifferentiated (not allowed to reach confluency) or differentiated (cultured for 48 hours in adipocyte differentiation medium). The concentrations of HGF were measured in duplicate and interpolated from the HGF standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean HGF concentration was determined to be 2,636 pg/mL in undifferentiated 3T3-L1 cell extract and 88 pg/mL in adipocyte differentiated 3T3-L1 cell extract.



Interpolated concentrations of native HGF in rat serum and plasma samples

The concentrations of HGF were measured in duplicates, interpolated from the HGF standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 20%, plasma (EDTA) 100%, plasma (citrate) 100%, and plasma (heparin) 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean HGF concentration was determined to be 79,543 pg/mL in serum, 3,151 pg/mL in plasma (EDTA), 2,395 pg/mL in plasma (citrate) and 2,611 pg/mL in plasma heparin).



Recombinant rat and mouse HGF standard curves

Recombinant rat HGF was prepared at 4 ng/mL and diluted with a 2-fold titration alongside of mouse HGF standard curve, and assayed for cross reactivity. 100% cross-reactivity was observed.

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