

Product datasheet

Human FGF1 ELISA Kit ab219636

Recombinant SimpleStep ELISA

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Overview

Product name Human FGF1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
extract	8			3.4%

Inter-assay

Sample	n	Mean	SD	CV%
extract	3			3.8%

Sample type

Cell culture supernatant, Saliva, Urine, Serum, Tissue Extracts, Cell culture media

Assay type

Sandwich (quantitative)

Sensitivity

1.97 pg/ml

Range

18.75 pg/ml - 1200 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Saliva	88	87% - 91%
Urine	81	78% - 83%
Serum	91	89% - 94%
Tissue Extracts	103	101% - 104%
Cell culture media	114	112% - 115%

Assay time

1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview Human FGF1 ELISA Kit (ab219636) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of FGF1 protein in cell culture supernatant, saliva, serum, tissue extracts, urine, and cell culture media. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human FGF1 with 1.97 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 Fibroblast growth factor 1 (FGF1) is a heparin-binding fibroblast growth factor that plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. Specifically, FGF1 binds to FGFR1 in the presence of heparin leading to FGFR1 dimerization and activation. Endogenous FGF-1 is found in the nucleus of most cell types. Nuclear localization is required for FGF-1 mitogenic activity. FGF-1 promotes tumor development by promoting cancer cell proliferation and survival. Mouse and rat FGF1 are 95.5% identical to human FGF1.

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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 Microplate (12 x 8 well strips)

Properties

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

Components	1 x 96 tests
10X Human FGF1 Capture Antibody	1 x 600µl
10X Human FGF1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml

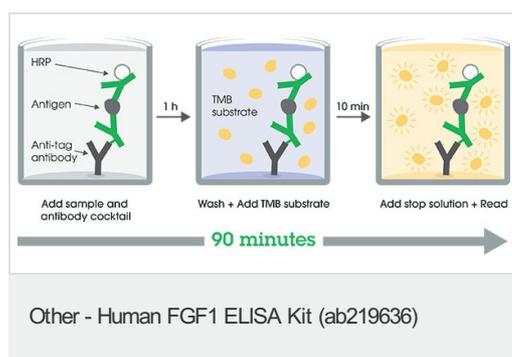
Components	1 x 96 tests
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml
Human FGF1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent 50BS	1 x 20ml
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function The heparin-binding fibroblast growth factors play important roles in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. They are potent mitogens in vitro.

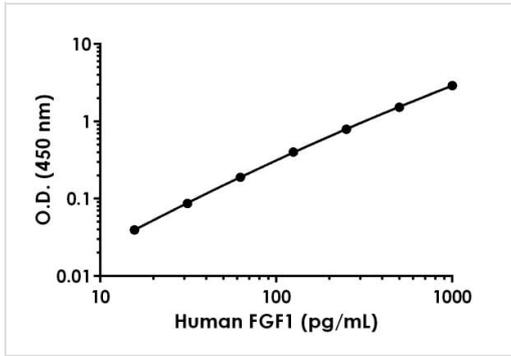
Sequence similarities Belongs to the heparin-binding growth factors family.

Cellular localization Secreted. Cytoplasm. Cytoplasm > cell cortex. Lacks a cleavable signal sequence. Within the cytoplasm, it is transported to the cell membrane and then secreted by a non-classical pathway that requires Cu(2+) ions and S100A13. Secreted in a complex with SYT1.

Images

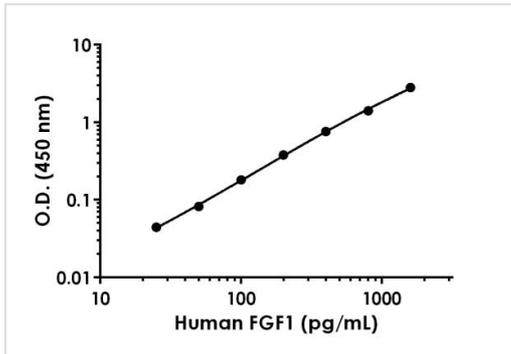


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



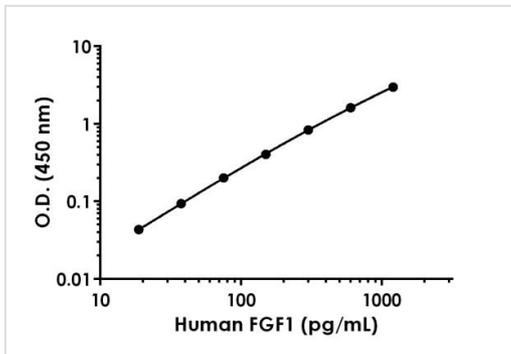
Background-subtracted data values (mean +/- SD) are graphed.

Example of human FGF1 standard curve in Sample Diluent NS.



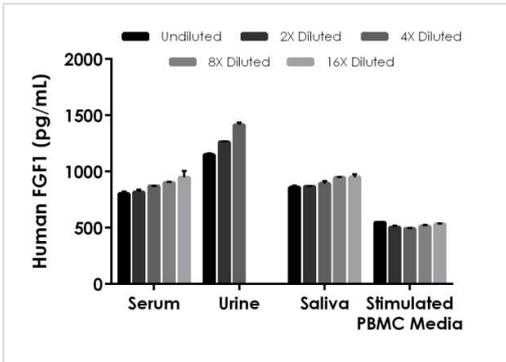
Background-subtracted data values (mean +/- SD) are graphed.

Example of human FGF1 standard curve in Sample Diluent 50BS.



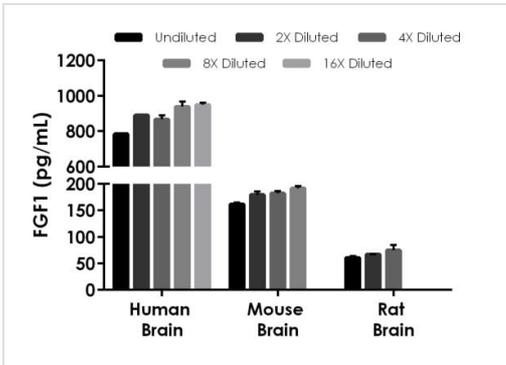
Background-subtracted data values (mean +/- SD) are graphed.

Example of human FGF1 standard curve in Sample Diluent 1X Cell Extraction buffer PTR.



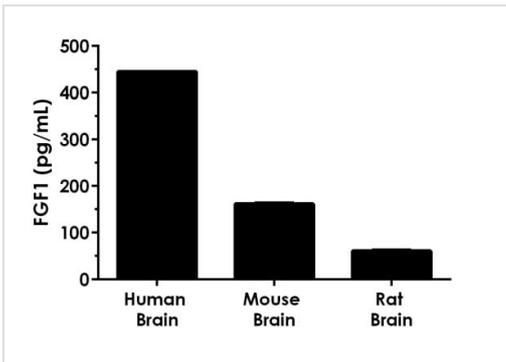
Interpolated concentrations of spiked FGF1 in human serum, urine, saliva, and stimulated PBMC media samples.

The concentrations of FGF1 were measured in duplicates, interpolated from the FGF1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, urine 50%, saliva 50%, and stimulated PBMC media 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean FGF1 concentration was determined to be 868 pg/mL in neat serum, 1,275 pg/mL in neat urine, 903 pg/mL in neat saliva, and 518 pg/mL in neat stimulated PBMC culture media.



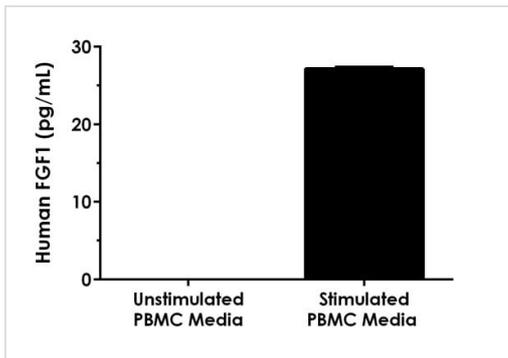
Interpolated concentrations of native FGF1 in human, mouse, and rat brain samples based on 40 µg/mL, 20 µg/mL, and 20 µg/mL extract loads, respectively.

The concentrations of FGF1 were measured in duplicate and interpolated from the FGF1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean FGF1 concentration was determined to be 886 pg/mL in human brain extract, 179 pg/mL in mouse brain extract, and 68 pg/mL in rat brain extract.



Interpolated concentrations of native FGF1 in human, mouse, and rat brain samples based on 20 µg/mL extract loads for each sample type.

The concentrations of FGF1 were measured in duplicate and interpolated from the FGF1 standard curve. The interpolated values are plotted (mean +/- SD, n=2). The mean FGF1 concentration was determined to be 445 pg/mL in human brain extract, 161 pg/mL in mouse brain extract, and 61 pg/mL in rat brain extract.



Interpolated concentrations of native FGF1 in human PBMC unstimulated and stimulated media samples.

The concentrations of FGF1 were measured in duplicates and interpolated from the FGF1 standard curves. Undiluted samples are as follows: unstimulated PBMC media 100% and stimulated PBMC media 100%. The interpolated values are plotted (mean \pm SD, $n=2$). The level of FGF1 in neat unstimulated PBMC media was below the 7th point of the standard curve and could not be interpolated. The mean FGF1 concentration was determined to be 27 pg/mL in neat stimulated PBMC media. PBMC media samples were cultured in RPMI media with 10% fetal bovine serum (unstimulated) for 24 hours and then stimulated for 48 hours with 1.5% PHAM.

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Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Sandwich ELISA - Human FGF1 ELISA Kit
(ab219636)

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

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