abcam

Product datasheet

Human BMP-4 ELISA Kit ab231930

リコンビナント SimpleStep ELISA

2 References 画像数 10

製品の概要

製品名 Human BMP-4 ELISA Kit

検出方法 Colorimetric

再現性

Intra-Assay（同時再現性）

サンプル	N	平均値	SD	CV%
HT-29 S/N	5			6.3%

Inter-Assay（日差再現性）

サンプル	N	平均値	SD	CV%
HT-29 S/N	3			4.9%

サンプルの種類 Cell culture supernatant, Serum, Cell culture extracts, Tissue Extracts, EDTA Plasma, Cit plasma

アッセイタイプ Sandwich (quantitative)

検出感度 0.28 pg/ml

検出範囲 12 pg/ml - 750 pg/ml

添加回収試験

特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Serum	89	86% - 91%
Cell culture extracts	104	97% - 108%
Tissue Extracts	92	87% - 99%
Cell culture media	118	110% - 125%
EDTA Plasma	85	80% - 90%
Cit plasma	87	82% - 93%

全工程の試験時間 1h 30m

ステップ One step assay

種交差性 **交差種:** Human

交差が予測される動物種: Cow, Rhesus monkey

製品の概要 Human BMP-4 ELISA Kit (ab231930) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of BMP-4 protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, serum, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human BMP-4 with NULL NULL 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.

特記事項 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.

試験プラットフォーム Pre-coated microplate (12 x 8 well strips)

製品の特性

保存方法 Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
10X Human BMP-4 Capture Antibody	1 x 600µl
10X Human BMP-4 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml

内容	1 x 96 tests
Human BMP-4 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

機能

Induces cartilage and bone formation. Also act in mesoderm induction, tooth development, limb formation and fracture repair. Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction.

組織特異性

Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines.

関連疾患

Defects in BMP4 are the cause of microphthalmia syndromic type 6 (MCOPS6) [MIM:607932]; also known as microphthalmia and pituitary anomalies or microphthalmia with brain and digit developmental anomalies. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues (anophthalmia). In many cases, microphthalmia/anophthalmia occurs in association with syndromes that include non-ocular abnormalities. MCOPS6 is characterized by microphthalmia/anophthalmia associated with facial, genital, skeletal, neurologic and endocrine anomalies.
Defects in BMP4 are the cause of non-syndromic orofacial cleft type 11 (OFC11) [MIM:600625]. Non-syndromic orofacial cleft is a common birth defect consisting of cleft lips with or without cleft palate. Cleft lips are associated with cleft palate in two-third of cases. A cleft lip can occur on one or both sides and range in severity from a simple notch in the upper lip to a complete opening in the lip extending into the floor of the nostril and involving the upper gum. OFC11 is an unusual anomaly consisting of a paramedian scar of the upper lip with an appearance suggesting that a typical cleft lip was corrected in utero.

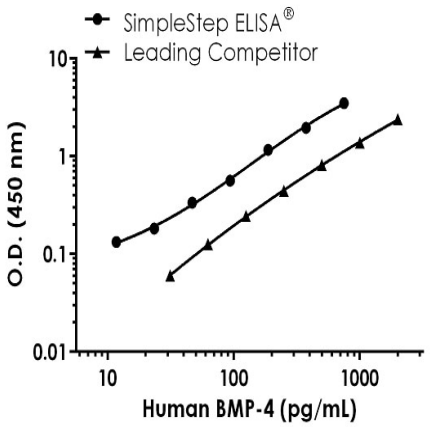
配列類似性

Belongs to the TGF-beta family.

細胞内局在

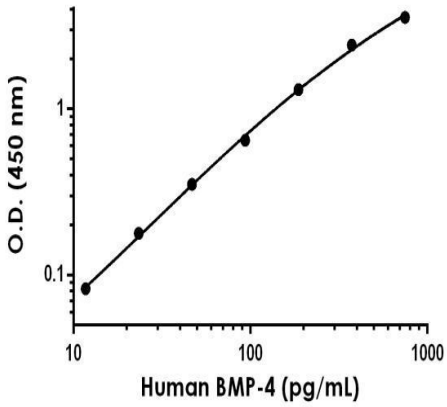
Secreted > extracellular space > extracellular matrix.

画像



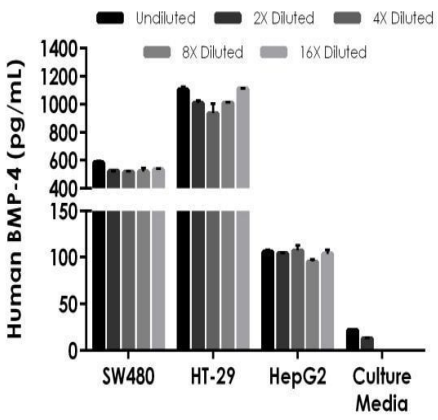
Human BMP-4 Competitor standard curve comparison

Standard curve comparison between Human BMP-4 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.



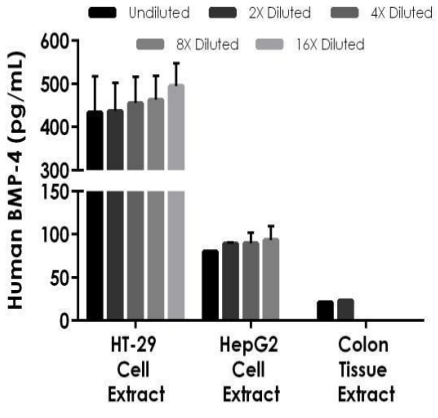
Example of human BMP-4 standard curve in Sample Diluent NS.

The BMP-4 standard curve was prepared as described in Section 10. Background-subtracted data values (mean +/- SD) are graphed.



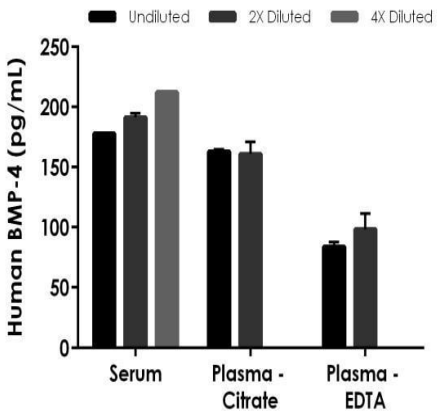
Interpolated concentrations of native BMP-4 in human cell culture supernatant samples.

The concentrations of BMP-4 were measured in duplicates, interpolated from the BMP-4 standard curves and corrected for sample dilution. Undiluted samples are as follows: SW480 cell culture supernatant 100%, HT-29 cell culture supernatant 50%, HepG2 cell culture supernatant 100%, and naïve culture media (100% RPMI + 10% FBS) 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean BMP-4 concentration was determined to be 535.2 pg/mL in neat SW480 cell culture supernatant, 1035 pg/mL in neat HT-29 cell culture supernatant, 103.3 pg/mL in HepG2 cell culture supernatant, and 24.02 pg/mL in naïve culture media containing 10% FBS.



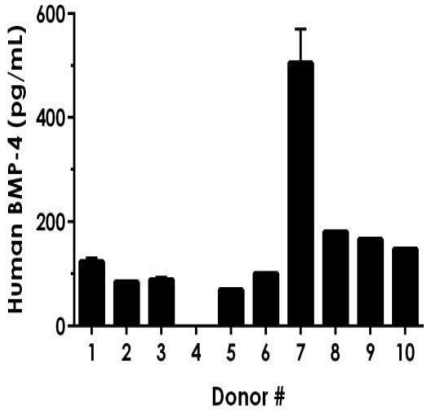
Interpolated concentrations of native BMP-4 in human cell and tissue extract.

Interpolated concentrations of native BMP-4 in human HT-29 cell extract based on a 150 µg/mL extract load, HepG2 cell extract based on a 300 µg/mL extract load, and colon tissue extract based on a 1,000 µg/mL extract load. The concentrations of BMP-4 were measured in duplicate and interpolated from the BMP-4 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean BMP-4 concentration was determined to be 456.7 pg/mL in HT-29 cell extract, 88.13 pg/mL in HepG2 cell extract, and 22.20 pg/mL in colon tissue extract.



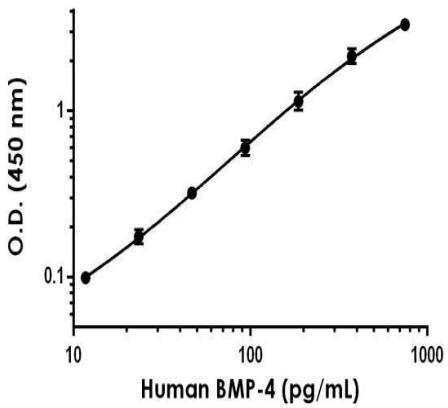
Interpolated concentrations of native BMP-4 in human serum and plasma samples.

The concentrations of BMP-4 were measured in duplicates, interpolated from the BMP-4 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 25%, and plasma (EDTA) 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean BMP-4 concentration was determined to be 193.9 pg/mL in neat serum, 162.0 pg/mL in neat plasma (citrate), and 91.1 pg/mL in neat plasma (EDTA).



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

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean BMP-4 concentration in neat serum was determined to be 163.5 pg/mL with a range of 69.95 – 505.8 pg/mL.

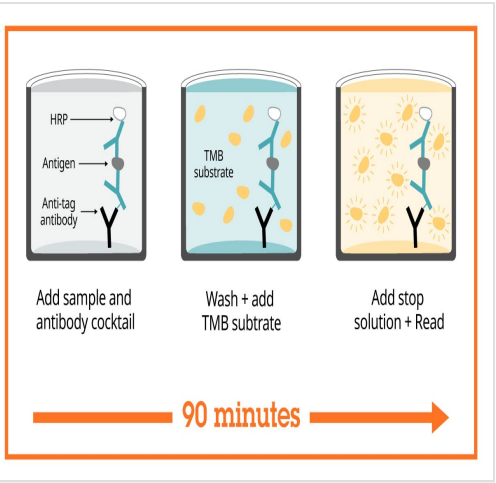


Example of human BMP-4 standard curve in 1X Cell Extraction Buffer PTR.

The BMP-4 standard curve was prepared as described in Section 10. Background-subtracted data values (mean +/- SD) are graphed.

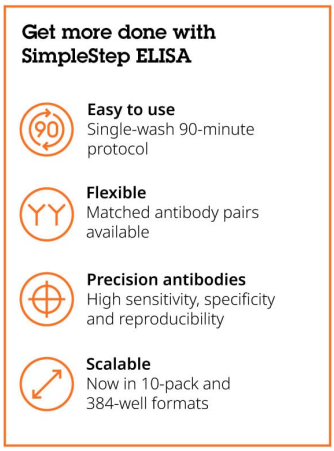
Sandwich ELISA - Human BMP-4 ELISA Kit (ab231930)

To learn more about the advantages of recombinant antibodies see **here**.



Sandwich ELISA - Human BMP-4 ELISA Kit (ab231930)

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.



Sandwich ELISA - Human BMP-4 ELISA Kit (ab231930)

To learn more about the advantages of SimpleStep ELISA® kits see **here**.

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