

Datasheet for ABIN3044692
BMP4 ELISA Kit



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Overview

Quantity:	96 tests
Target:	BMP4
Binding Specificity:	AA 293-408
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse BMP-4
Brand:	PicoKine™
Sample Type:	Osseous Tissue, Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Immunogen sequence: S293-R408
Specificity:	Expression system for standard: CHO Immunogen sequence: S293-R408
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Predicted Reactivity:	Bovine,Monkey

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target:	BMP4
Alternative Name:	BMP4 (BMP4 Products)
Background:	Protein Function: Induces cartilage and bone formation. Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction. . Background: Bone morphogenetic protein 4 is a protein that in humans is encoded by the BMP4 gene which is located to 14q22-q23. The protein encoded by this gene is a member of the bone morphogenetic protein family which is part of the transforming growth factor-beta superfamily. BMP4 is a polypeptide belonging to the TGF-β superfamily of proteins. It, like other bone morphogenetic proteins, is involved in bone and cartilage development, specifically tooth and limb development and fracture repair. It has been shown to be involved in muscle development, bone mineralization, and uterine bud development. BMP4 has also been implicated in Fibrodysplasia Ossificans Progressiva in which it is underexpressed. In human embryonic development, BMP4 is a critical signaling molecule required for the early differentiation of the embryo and establishing of a dorsal-ventral axis. BMP4 is secreted from the dorsal portion of the notochord, and it acts in concert with sonic hedgehog (released from the ventral portion of the notochord) to establish a dorsal-ventral axis for the differentiation of later structures. Also, BMP4 stimulates differentiation of overlying ectodermal tissue. Inhibition of the BMP4 signal (by chordin, noggin, or follistatin) causes the ectoderm to differentiate into the neural plate. Synonyms: Bone morphogenetic protein 4,BMP-4,Bone morphogenetic protein 2B,BMP-2B,Bmp4,Bmp-4, Dvr-4, Full Gene Name: Bone morphogenetic protein 4 Cellular Localisation: Secreted, extracellular space, extracellular matrix.
Gene ID:	12159
UniProt:	P21275
Pathways:	Steroid Hormone Mediated Signaling Pathway , Regulation of Muscle Cell Differentiation , Tube

Target Details

Formation, Skeletal Muscle Fiber Development

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Plate:	Pre-coated
Protocol:	mouse BMP-4 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for BMP-4 has been precoated onto 96-well plates. Standards (Expression system for standard: CHO, Immunogen sequence: S293-R408) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for BMP-4 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse BMP-4 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL mouse BMP-4 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse bone tissue, cell culture supernates or serum to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse BMP-4 standard solution and each sample be measured in duplicate.
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	4 °C, -20 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	Chen, Yang, Wu, Li, Li, Chang, Dai, Wang, Chang: "IL-33/ST2 axis mediates hyperplasia of
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intrarenal urothelium in obstructive renal injury." in: **Experimental & molecular medicine**, Vol. 50
, Issue 4, pp. 36, (2018) ([PubMed](#)).

