

Human BMP-4 ELISA Kit | BMP-4 elisa kit

BMP-4 (Human) OmniKine ELISA Kit

CATALOG #
AAA315784

REACTIVITY
Human

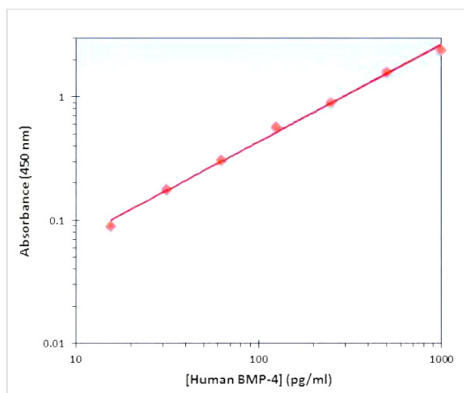
PRODUCT SYNONYMS

BMP-4; BMP-4 (Human) OmniKine ELISA Kit; Bone morphogenetic protein 4; Bone morphogenetic protein 2B; BMP-2B; DVR4; BMP-4 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	The OmniKine™ Human BMP-4 ELISA is capable of recognizing both recombinant and naturally produced Human BMP-4 proteins. The antigens listed below were tested at 50 ng/ml and did not exhibit significant cross-reactivity or interference.
Form/Format	12 x 8-Well Microstrips
Sequence Length	408
Assay Type	Quantitative Sandwich
Preparation and Storage	Store entire kit at 4 degree C until use.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for BMP-4 elisa kit	Principle of the Assay: The OmniKine™ Human BMP-4 ELISA Kit contains the components necessary for quantitative determination of natural or recombinant Human BMP-4 concentrations within any experimental sample including cell lysates, serum and plasma. This particular immunoassay utilizes the quantitative technique of a "Sandwich" Enzyme-Linked Immunosorbent Assay (ELISA) where the target protein (antigen) is bound in a "sandwich" format by the primary capture antibodies coated to each well-bottom and the secondary detection antibodies added subsequently by the investigator. The capture antibodies coated to the bottom of each well are specific for a particular epitope on Human BMP-4 while the user-added detection antibodies bind to epitopes on the captured target protein. Amid each step of the procedure, a series of wash steps must be performed to ensure the elimination of non-specific binding between proteins to other proteins or to the solid phase. After incubation and "sandwiching" of the target antigen, a peroxidase enzyme is conjugated to the constant heavy chain of the secondary antibody (either covalently or via Avidin/Streptavidin-Biotin interactions), allowing for a colorimetric reaction to ensue upon substrate addition. When the substrate TMB (3, 3', 5, 5'-Tetramethylbenzidine) is added, the reaction catalyzed by peroxidase yields a blue color that is representative of the antigen concentration. Upon sufficient color development, the reaction can be terminated through addition of Stop Solution (2 N Sulfuric Acid) where the color of the solution will turn yellow. The absorbance of each well can then be read by a spectrophotometer, allowing for generation of a standard curve and subsequent determination of protein concentration. Background/Introduction: BMP-4, also known as Bone morphogenetic protein 2B, is a 408 amino acid protein that is secreted into the extracellular space and matrix. It is a disulfide-linked homodimer and is part of a complex consisting of TWSG1 and CHRDL. BMP-4 is expressed in the lung as well as in the kidney at lower levels. It is also present in normal and neoplastic prostate tissues, and prostate cancer cell lines. It belongs to the TGF-beta family and is found to interact with GREM2. BMP-4 induces cartilage and bone formation as well as act in mesoderm induction, tooth development, limb formation and fracture repair. It also acts in concert with PTHLH/PTHrP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction. Defects in BMP4 are the cause of microphthalmia syndromic type 6 (MCOPS6); 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 also found to be the cause of non-syndromic orofacial cleft type 11 (OFC11). 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	157276593
NCBI GeneID	652
NCBI Accession #	NP_001193.2
NCBI GenBank Nucleotide #	NM_001202.5
UniProt Accession #	P12644; Q9UM80
Molecular Weight	46,555 Da
NCBI Official Full Name	bone morphogenetic protein 4 isoform a preproprotein
NCBI Official Synonym Full Names	bone morphogenetic protein 4
NCBI Official Symbol	BMP4
NCBI Official Synonym Symbols	ZYME; BMP2B; OFC11; BMP2B1; MCOPS6
NCBI Protein Information	bone morphogenetic protein 4
UniProt Protein Name	Bone morphogenetic protein 4
UniProt Gene Name	BMP4

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/human-elisa-kits/bmp-4/315784>