

**Datasheet for KOA0153****Human BMP-4 ELISA Kit****Overview**

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|----------------------|--------------------------------------------|
| <b>Description:</b>  | Human BMP-4 AccuSignal ELISA Kit - KOA0153 |
| <b>Item No.:</b>     | KOA0153                                    |
| <b>Size:</b>         | 1 Kit                                      |
| <b>Applications:</b> | ELISA                                      |
| <b>Reactivity:</b>   | Human                                      |
| <b>Range:</b>        | 62.5 pg/ml - 4000 pg/ml                    |

**Product Details**

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Background:</b>         | Bone morphogenetic protein 4 is a protein that in humans is encoded by the BMP4 gene which is located to 14q22-q23.1. 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-beta 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. 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. The standard product used in this kit is recombinant BMP-4 with the molecular mass of 26KDa. |
| <b>Synonyms:</b>           | BMP 2B, BMP 4, BMP2B, BMP2B1, BOMPR4A, Bone morphogenetic protein 2B, Bone morphogenetic protein 4, DVR4, OTTMUSP00000021065, OTTMUSP00000021066, ZYME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Detection Kit Type:</b> | ELISA Kit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Detection Range:</b>    | 62.5 pg/ml - 4000 pg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Sensitivity:</b>        | <4 pg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Target Details**

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| <b>Gene Name:</b>          | BMP4                                                                                                                                                                                                                |
| <b>Reactivity:</b>         | Human                                                                                                                                                                                                               |
| <b>Immunogen:</b>          | Expression system for standard: NSO; Immunogen sequence: S293-R408                                                                                                                                                  |
| <b>Purity/Specificity:</b> | Natural and recombinant human BMP-4. There is no detectable cross-reactivity with other relevant proteins.                                                                                                          |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - P12644</a></li><li>• <a href="#">NCBI - NP_001193.2</a></li><li>• <a href="#">GenelD - 652</a></li><li>• <a href="#">KOA0153 Protocol</a></li></ul> |

## Application Details

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| <b>Tested Applications:</b> | ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Application Note:</b>    | Useful in Sandwich ELISA for Quantitative Detection of Antigen. Aliquot 0.1ml per well of the 4000pg/ml, 2000pg/ml, 1000pg/ml, 500pg/ml, 250pg/ml, 125pg/ml, 62.5pg/ml human BMP-4 standard solutions into the precoated 96-well plate. Add 0.1ml of the sample diluent buffer into the control well (Zero well). Add 0.1ml of each properly diluted sample of human bone tissue or cell culture supernates to each empty well. It is recommended that each human BMP-4 standard solution and each sample be measured in duplicate. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Formulation

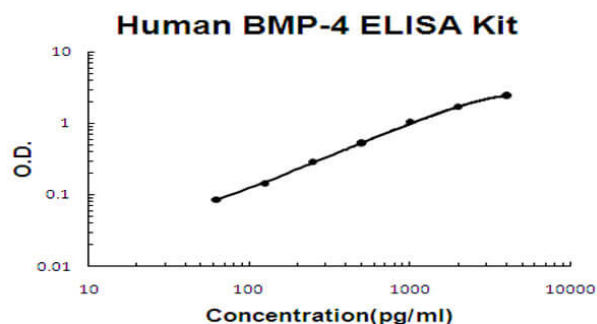
## Shipping & Handling

|                            |                                                                                                                                                                                                                                                                                                                               |
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| <b>Shipping Condition:</b> | Wet Ice                                                                                                                                                                                                                                                                                                                       |
| <b>Storage Condition:</b>  | Store vials at 4°C prior to opening. Centrifuge product if not completely clear after standing at room temperature. This product is stable for 6 months at 4°C as an undiluted liquid. Dilute only prior to immediate use. For extended storage freeze at -20°C or below for 12 months. Avoid cycles of freezing and thawing. |
| <b>Expiration:</b>         | See kit insert for complete instructions.                                                                                                                                                                                                                                                                                     |

## Images

**ELISA**

Human BMP-4 AccuSignal ELISA Kit standard curve. Assay  
Range: 62.5pg/ml-4000pg/ml. Sensitivity: <4pg/ml.

**Disclaimer**

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.