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# Anti-BMP2 Antibody (C-Terminus)

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS17313

## Product Information

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| **Application** | WB, IHC-P |
| **Primary Accession** | P12643 |
| **Predicted** | Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Chicken, Sheep, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 44702 |
| **Concentration (mg/ml)** | 1 mg/ml |

## Additional Information

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| **Gene ID** | 650 |
| **Alias Symbol** | BMP2 |
| **Other Names** | BMP2, BDA2, BMP-2, BMP-2A, BMP2A, Bone morphogenetic protein 2, Bone morphogenetic protein 2A |
| **Target/Specificity** | Recognizes endogenous levels of BMP2 protein. |
| **Reconstitution & Storage** | PBS, pH 7.3, 0.01% sodium azide, 30% glycerol. Store at -20°C. Aliquot to avoid freeze/thaw cycles. |
| **Precautions** | Anti-BMP2 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | BMP2 |
| **Synonyms** | BMP2A |
| **Function** | Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including cardiogenesis, neurogenesis, and osteogenesis (PubMed:18436533, PubMed:24362451, PubMed:31019025). Induces cartilage and bone formation (PubMed:3201241). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:15064755, PubMed:17295905, PubMed:18436533). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed:7791754). In turn, BMPR1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. Also acts to promote expression of HAMP, via |

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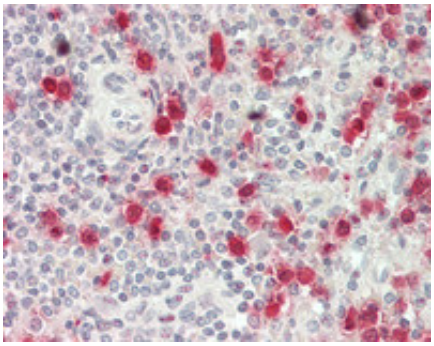
| | the interaction with its receptor BMPR1A/ALK3 (PubMed:31800957). Can also signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed:16771708, PubMed:20851880). Also stimulates the differentiation of myoblasts into osteoblasts via the EIF2AK3-EIF2A-ATF4 pathway by stimulating EIF2A phosphorylation which leads to increased expression of ATF4 which plays a central role in osteoblast differentiation (PubMed:24362451). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, expression is repressed during the bell stage by MSX1-mediated inhibition of CTNNB1 signaling (By similarity). |
| **Cellular Location** | Secreted. |
| **Tissue Location** | Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine |

## Images



Human Spleen: Formalin-Fixed, Paraffin-Embedded (FFPE)