

| DESCRIPTION | |
|---------------------------|--|
| Species Reactivity | Human |
| Specificity | Detects human BMP-7 in ELISAs. In ELISAs, this antibody shows approximately 25-50% cross-reactivity with recombinant human (rh) BMP-6 and no cross-reactivity with rhBMP-2, -3, -4, -5, or -8. |
| Source | Monoclonal Mouse IgG ₁ Clone # 164313 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | Chinese hamster ovary cell line CHO-derived recombinant human BMP-7 Arg292-His431 Accession # P18075 |
| Endotoxin Level | <0.10 EU per 1 µg of the antibody by the LAL method. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

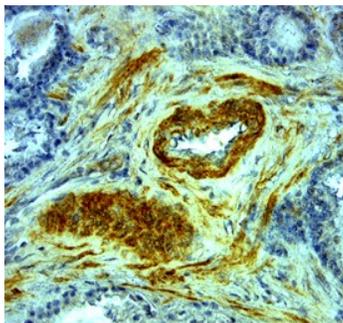
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|---|--|---|
| Immunohistochemistry | 8-25 µg/mL | See Below |
| Human BMP-7 Sandwich Immunoassay | | Reagent |
| ELISA Capture | 2-8 µg/mL | Human BMP-7 Antibody (Catalog # MAB3542) |
| ELISA Detection | 0.5-2.0 µg/mL | Human BMP-7 Biotinylated Antibody (Catalog # BAM354) |
| Standard | | Recombinant Human BMP-7 (Catalog # 354-BP) |
| Neutralization | Measured by its ability to neutralize BMP-7-induced alkaline phosphatase production in the ATDC5 mouse chondrogenic cell line. Erlacher, L. <i>et al.</i> (1998) <i>J. Bone Miner. Res.</i> 13 :383. The Neutralization Dose (ND ₅₀) is typically 4-12 µg/mL in the presence of 1 µg/mL Recombinant Human BMP-7 and 50 µg/mL L-ascorbic acid. | |

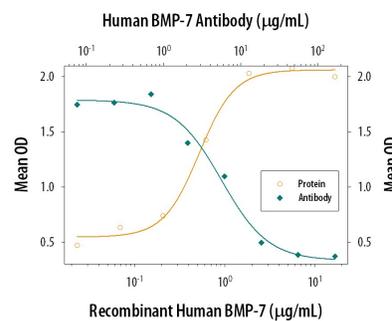
DATA

Immunohistochemistry



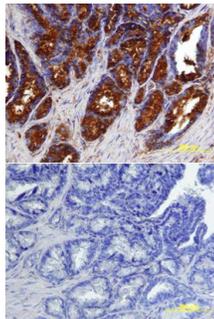
BMP-7 in Human Prostate Cancer Tissue. BMP-7 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using 25 µg/mL Human BMP-7 Monoclonal Antibody (Catalog # MAB3542) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # [CTS002](#)) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Neutralization



Alkaline Phosphatase Production Induced by BMP-7 and Neutralization by Human BMP-7 Antibody. Recombinant Human BMP-7 (Catalog # [354-BP](#)) induces alkaline phosphatase production in the ATDC5 mouse chondrogenic cell line in a dose-dependent manner (orange line). Alkaline phosphatase production elicited by Recombinant Human BMP-7 (1 µg/mL) is neutralized (green line) by increasing concentrations of Human BMP-7 Monoclonal Antibody (Catalog # MAB3542). The ND₅₀ is typically 4-12 µg/mL in the presence of L-ascorbic acid (50 µg/mL).

Immunohistochemistry



BMP-7 in Human Prostate. BMP-7 was detected in immersion fixed paraffin-embedded sections of human prostate using Human BMP-7 Monoclonal Antibody (Catalog # MAB3542) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

BMP-7, or osteogenic protein 1 (OP-1), is one of at least 15 structurally and functionally related BMPs, which are members of the transforming growth factor β (TGF-β) superfamily. BMPs regulate cartilage and bone formation, embryogenesis and morphogenesis of various tissues and organs, and growth, differentiation, chemotaxis and apoptosis of various cell types. Biologically active BMP-7 is a disulfide-linked homodimer. Cellular responses to BMP-7 have been shown to be mediated by the formation of hetero-oligomeric complexes of type I and type II serine/threonine kinase receptors.