

## DESCRIPTION

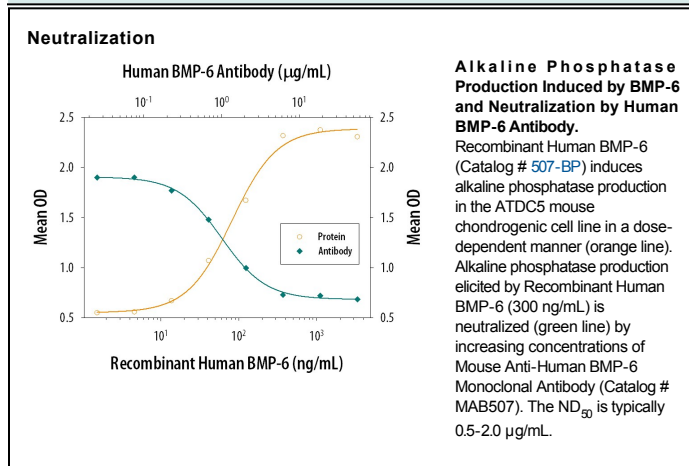
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human BMP-6 in Western blots. In Western blots, no cross-reactivity with recombinant human (rh) BMP-2, rhBMP-4, rhBMP-5, or rhBMP-7 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 74219
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human BMP-6 Arg296-His428 Accession # Q4VBA3
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl 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
<b>Western Blot</b>	1 µg/mL	Recombinant Human BMP-6 (Catalog # 507-BP) under non-reducing conditions only
<b>Human BMP-6 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Human BMP-6 Antibody (Catalog # MAB507)
<b>ELISA Detection Standard</b>	0.1-0.4 µg/mL	Human BMP-6 Biotinylated Antibody (Catalog # BAF507) Recombinant Human BMP-6 (Catalog # 507-BP)
<b>Neutralization</b>	Measured by its ability to neutralize BMP-6-induced alkaline phosphatase production in the ATDC5 mouse chondrogenic cell line. Nakamura, K. <i>et al.</i> (1999) <i>Exp. Cell Res.</i> <b>250</b> :351. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.5-2.0 µg/mL in the presence of 300 ng/mL Recombinant Human BMP-6.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human BMP-6 is one of at least 15 structurally and functionally related BMPs, which are members of the transforming growth factor  $\beta$  (TGF- $\beta$ ) superfamily. BMPs were originally identified as protein regulators of cartilage and bone formation. However, they have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs have also been shown to regulate the growth, differentiation, chemotaxis, and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells, and neuronal cells. Similarly to other TGF- $\beta$  family proteins, BMPs are highly conserved across animal species. At the amino acid sequence level, mature human and mouse BMP-6 shares 96% amino acid sequence identity. BMP-6 is synthesized as a large precursor protein that is cleaved at the dibasic cleavage site (RXXR) to release the carboxy-terminal domain. Biologically active BMP-6 is a disulfide-linked homodimer of the carboxy-terminal 132 amino acid residues that contains the characteristic seven conserved cysteine residues involved in the formation of the cysteine knot and the single interchain disulfide bond. Cellular responses to BMP-6 have been shown to be mediated by the formation of hetero-oligomeric complexes of type I and type II serine/threonine kinase receptors. Based on amino acid sequence similarity, BMP-5, -6, -7, and -8 are in the same subgroup.

## References:

1. Ebendal, T. *et al.* (1998) *J. Neurosci. Res.* **51**:139.
2. Reddi, A.H. (1998) *Nature Biotechnology* **16**:247.