

DESCRIPTION

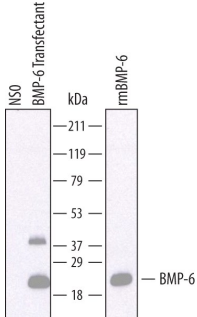
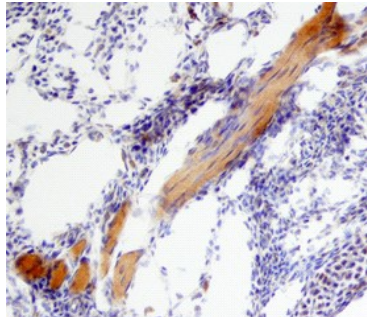
Species Reactivity	Mouse
Specificity	Detects recombinant human and mouse BMP-6 in direct ELISAs and detects mouse BMP-6 in Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse (rm) BMP-5 and rmBMP-7 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse BMP-6 Ser372-His510 Accession # P20722
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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse BMP-6 by Western Blot. Western blot shows lysates of NS0 mouse myeloma cell line either mock transfected or transfected with mouse BMP-6. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse BMP-6 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6325) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). For additional reference, Recombinant Mouse BMP-6 (Catalog # 6325-BM) (10ng/lane) was included. A specific band was detected for BMP-6 at approximately 20kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>BMP-6 in Mouse Embryo. BMP-6 was detected in immersion fixed frozen sections of mouse embryo (15 d.p.c.) using Sheep Anti-Mouse BMP-6 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6325) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to skeletal muscle cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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

Bone Morphogenetic Protein 6 (BMP-6), also known as Vgr-1, is one of at least 15 structurally and functionally related BMPs which are members of the transforming growth factor β (TGF- β) superfamily. Mouse BMP-6 is synthesized as a 510 amino acid (aa) precursor protein that is cleaved at the dibasic cleavage site (RxxR) to release the 18 kDa C-terminal mature protein. Biologically active BMP-6 consists of a disulfide-linked homodimer of the mature proteins (1, 2). Mature mouse BMP-6 shares 96% and 98% aa sequence identity with human and rat BMP-6, respectively. Cellular responses to BMP-6 are mediated by hetero-oligomeric complexes of type I (Activin RIA/ALK-2 and BMPRII/ALK-3) and type II (Activin RIIA and BMPRII) serine/threonine kinase receptors (3-5). Glycosylation of BMP-6 is required for its interaction with Activin RIA (6). BMP-6 induces the expression of Noggin and is subsequently antagonized by Noggin (7, 8). BMP-6 induces a wide range of cellular responses. It promotes osteoblast differentiation from mesenchymal stem cells (5), chondrocyte maturation (9), Ang II-induced aldosterone production in the adrenal cortex (3), hormone production and responsiveness in ovarian granulosa cells (10), iNOS and TNF- α production in macrophages (4), the cell death of B cells (8), and neurite outgrowth (11). BMP-6 expression is induced in astrocytes surrounding sites of brain injury where it functions as a neuroprotectant (11, 12). BMP-6 is upregulated during prostate cancer progression and promotes tumor cell metastasis to bone (13). Through interactions with the BMP coreceptor RGM-C/Hemojuvelin, BMP-6 plays an important role in iron homeostasis by promoting Hpcidin expression and preventing serum iron overload (14, 15).

References:

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