

Mouse BMP-6 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG Catalog Number: AF6325

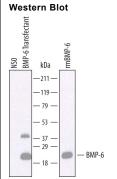
DESCRIPTION			
Species Reactivity	Mouse		
Specificity	Detects recombinant human and mouse BMP-6 in direct ELISAs and detects mouse BMP-6 in Western blots. In direct ELISAs, approximat 5% cross-reactivity with recombinant mouse (rm) BMP-5 and rmBMP-7 is observed.		
Source	Polyclonal Sheep IgG		
Purification	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 either lyophilized or as a 0.2 µm filtered solution in PBS.		

APPLICATIONS

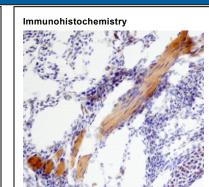
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 μg/mL	See Below
Immunohistochemistry	5-15 μg/mL	See Below

DATA



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.



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 Polydonal 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.

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

- 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.

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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 BMPR-IA/ALK-3) and type II (Activin RIIA and BMPR-II) 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 Hepcidin expression and preventing serum iron overload (14, 15).

References:

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