**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 mBMP-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**

<table>
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<tr>
<th>Recommendation</th>
<th>Sample</th>
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<tbody>
<tr>
<td><strong>Western Blot</strong></td>
<td>1 μg/mL</td>
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<tr>
<td><strong>Immunohistochemistry</strong></td>
<td>5-15 μg/mL</td>
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**DATA**

**Western Blot**
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/lanne) 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.

**Immunohistochemistry**
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.

**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.
- 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.
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: