

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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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 Hemojuvelin expression and preventing serum iron overload (14, 15).

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