

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human BMP-9 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant mouse BMP-9 is observed. In direct ELISAs less than 2% cross-reactivity with recombinant human (rh) BMP-2, -3, -4, -5, -7, -8, and rhBMP-10 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human BMP-9 Ser320-Arg429 Accession # Q9UK05
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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.

**Neutralization** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

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

## BACKGROUND

Human BMP-9, also known as growth and differentiation factor 2 (GDF-2), is a member of the BMP subgroup of the TGF-β superfamily proteins that signal through heterodimeric complexes composed of type I and type II BMP receptors. BMP-9 regulates the development and function of a variety of embryonal and adult tissues (1, 2). The human BMP-9 cDNA encodes a 429 amino acid (aa) precursor that includes a 22 aa signal sequence, a 298 aa propeptide, and a 111 aa mature protein (3). Unlike with other BMP family proteins, the propeptide does not interfere with the biological activity of BMP-9 and remains associated with the mature peptide after proteolytic cleavage (4). Human and mouse BMP-9 share 96% aa sequence identity. Within the mature protein, human BMP-9 shares 64% aa sequence identity with human BMP-10 and less than 50% aa sequence identity with other BMPs. BMP-9 is expressed by non-parenchymal cells in the liver, (5, 6) where it promotes lipid metabolism and inhibits glucose production (7). BMP-9 exerts a prolonged hypoglycemic effect which may be due to an enhancement of insulin release (7). BMP-9 interacts with a high affinity specific heteromeric receptor expressed on liver endothelial cells that has been identified as ALK-1 (4-6). In the embryonal CNS, BMP-9 functions in the development and maintenance of the cholinergic neuronal phenotype (8-10). BMP-9 also induces the differentiation of mesenchymal stem cells into the chondrogenic lineage (11, 12). At low concentrations, BMP-9 is a proliferative factor for hematopoietic progenitor cells, but at higher concentrations, it enhances TGF-β1 production and inhibits hematopoietic progenitor colony formation (13).

## PRODUCT SPECIFIC NOTICES

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