

DESCRIPTION

Species Reactivity	Zebrafish
Specificity	Detects zebrafish BMP-2 and BMP-4 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 169125
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant zebrafish BMP-4 Ser288-Arg400 Accession # NP_571417
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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.

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

BMP-4 is one of at least 15 structurally and functionally-related BMPs, which are members of the transforming growth factor- β (TGF- β) superfamily. BMPs were originally identified as protein regulators of cartilage and bone formation. They have since been shown to have roles in embryogenesis and morphogenesis of various tissues and organs. BMPs have also been shown to regulate the growth, differentiation, chemotaxis, and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells, and neuronal cells. Similarly to other TGF- β superfamily proteins, BMPs are highly conserved across animal species. Zebrafish BMP-4 shares 73% amino acid (aa) sequence identity with human and murine BMP-4, and 86% aa identity with zebrafish BMP-2b. Zebrafish BMP-4 mRNA is detected throughout embryonic development and has been detected in tissues of adult fish, including the brain, heart, digestive tracts, testes, and jaw. BMP-4 has been shown to play roles in directing zebrafish heart looping and in ear development. The combined expression pattern of zBMP-2a/2b/4 coincides with areas where BMP-2/4 expression would be found in other vertebrates. Biologically active BMP-4 is a disulfide-linked homodimer of the carboxy-terminal 113 aa that contains the characteristic seven conserved cysteine residues involved in the formation of the cysteine knot and the single interchain disulfide bond.

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