

RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Rabbit Anti-Human BMP-7 With HRP-Conjugated Second Antibody

Catalog No. DS-PB-00293	Species Human	Isotype IgG
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Preparation

Immunogen: Antisera to human BMP7 were raised by repeated immunizations of rabbits with highly purified antigen.

Preparation: Purified IgG was prepared by affinity chromatography.

Specificity

DS-PB-00293 recognizes the disulphidelinked homodimeric cysteine knot protein known as human Bone Morphogenetic Protein 7 (BMP7) or Osteogenic protein 1 (OP1). BMP7 is a member of the transforming growth factor beta (TGFB) superfamily and one of a growing number of osteogenic proteins shown to induce bone and cartilage formation, and to play an important role in developmental processes, including cell proliferation, differentiation, apoptosis and morphogenesis.

BMPs act through binding with a receptor complex consisting of type I and type II serine/threonine kinases, resulting ultimately in the activation of the Smad protein and mitogenactivated protein kinase (MAPK) signaling pathways. Several antagonist proteins, including, noggin, chordin, gremlin and follistatin, are responsible for modulating the signaling effects of BMPs, through the binding and blocking of receptor ligands, thereby preventing activation.

Studies into the properties of BMP7 have largely focused on its role during ontogeny of the kidney, owing to its prominent expression in the renal tubules. Results from research into experimental diabetic nephropathy have indicated that BMP7 has antifibrogenic properties and appears to act as an antagonist to TGFBeta.

Formulation

Product Type: Polyclonal Antibody

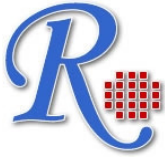
Product Form: Purified IgG liquid

Buffer Solution: Phosphate buffered saline

Preservative Stabilizers: 0.09% Sodium Azide (NaN₃)

Approx. Protein Concentrations : IgG concentration 1 mg/ml

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Storage

18 months from date of dispatch.

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended. This product should be stored undiluted.

Avoid repeated freezing and thawing as this may denature the antibody.

Should this product contain a precipitate we recommend microcentrifugation before use.

Applications

Table Summary of antibody applications and working conditions

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	.			
Western Blotting	.			
Immunohistology - frozen			.	
Immunohistology - paraffin			.	
Immunohistology - resin			.	
Immunoprecipitation			.	
Flow Cytometry			.	
Immunofluorescence			.	
Neutralization			.	

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application.

Secondary Antibody Applications

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
Immunoassay (ELISA, Western blot)	.			1:5000-1:10000

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References

1. Balemans, W. and Van Hul, W. (2002) Extracellular regulation of BMP signaling in vertebrates: a cocktail of modulators. *Dev. Biol.* 250: 231250.
2. Sebald, W. et al. (2004) Molecular recognition in bone morphogenetic protein (BMP)/receptor interaction. *Biol. Chem.* 385: 697710.
3. Wang, ShiNong et al. (2001) Loss of tubular bone morphogenetic protein7 in diabetic nephropathy. *J. Am. Soc. Nephrol.* 12: 23922399.
4. Godin, R.E. et al. (1998) Regulation of BMP7 expression during kidney development. *Development* 125: 34733482.
5. Trousse, F. et al. (2001) BMP4 mediates apoptotic cell death in the developing chick eye. *J. Neuroscience* 21: 12921301.

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