

## Datasheet: AHP960

<b>Description:</b>	RABBIT ANTI HUMAN BMP-2
<b>Specificity:</b>	BMP-2
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	50 µg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			0.25ug/ml
ELISA	▪			0.5 - 5.0ug/ml
Immunoprecipitation			▪	
Western Blotting	▪			0.1 - 1.0ug/ml
Immunofluorescence	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Antiserum Preparation</b>	Antisera to human BMP-2 were raised by repeated immunisations of rabbits with highly purified antigen.
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	<a href="#">Recombinant human BMP-2</a>

**External Database  
Links**

**UniProt:**

[P12643](#)   [Related reagents](#)

**Entrez Gene:**

[650](#)   BMP2   [Related reagents](#)

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**Synonyms**

BMP2A

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**Specificity**

**Rabbit anti Human BMP-2 antibody** recognizes the disulphide-linked homodimeric cysteine knot protein known as human Bone Morphogenetic Protein 2 (BMP-2/BMP-2a), full-length 396 amino acids. BMP-2 is a member of the Transforming Growth Factor beta (TGF-B) 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 mitogen-activated 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.

The realization that BMP-2 was involved in the stimulation of bone formation emerged from research in spinal surgery, following the discovery that the healing of bones was directed by proteins contained within the bone matrix itself.

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**ELISA**

This purified human BMP-2 antibody may be used in an indirect ELISA or as the capture reagent in a sandwich ELISA with our [biotinylated human BMP-2 antibody](#) (AHP960B) as the detection reagent.

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**Western Blotting**

This antibody may be used in Western Blotting under either reducing or non-reducing conditions.

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**References**

1. Bessa, P.C. *et al.* (2008) Osteoinduction in human fat-derived stem cells by recombinant human bone morphogenetic protein-2 produced in Escherichia coli. [Biotechnol Lett. 30 \(1\): 15-21.](#)

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**Further Reading**

1. Kimura, N. *et al.* (2000) BMP2-induced apoptosis is mediated by activation of the TAK1-p38 kinase pathway that is negatively regulated by Smad6. [J Biol Chem. 275 \(23\): 17647-52.](#)
2. Kirsch, T. *et al.* (2000) BMP-2 antagonists emerge from alterations in the low-affinity binding epitope for receptor BMPRII. [EMBO J. 19 \(13\): 3314-24.](#)
3. Keller, S. *et al.* (2004) Molecular recognition of BMP-2 and BMP receptor IA. [Nat Struct Mol Biol. 11 \(5\): 481-8.](#)
4. Balemans, W. & VanHul, W. (2002) Extracellular regulation of BMP signaling in vertebrates: a cocktail of modulators. [Dev Biol. 250 \(2\): 231-50.](#)
5. Sebald, W. *et al.* (2004) Molecular recognition in bone morphogenetic protein (BMP)/receptor interaction. [Biol Chem. 385 \(8\): 697-710.](#)

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**Storage**

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.

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**Shelf Life**

18 months from date of despatch.

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at:  
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)  
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)  
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)  
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)  
Sheep Anti Rabbit IgG (2AB02...) [Biotin](#)  
Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®549](#), [DyLight®649](#),  
[DyLight®680](#), [DyLight®800](#)

### Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)  
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)  
[TidyBlot™ WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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