

Product datasheet

Recombinant human BMP4 protein ab51998

Overview

Product name	Recombinant human BMP4 protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli
Amino Acid Sequence	
Accession	P12644
Species	Human
Amino acids	293 to 408

Specifications

Our [Abpromise guarantee](#) covers the use of **ab51998** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	The ED ₅₀ as determined by dose-dependent induction of alkaline phosphatase activity with C2C12 cells is in the range of 2-12µg/ml.
----------------------------	--

Applications	SDS-PAGE
---------------------	----------

Purity	> 95 % SDS-PAGE. Sterile filtered. Endotoxin level is < 0.1 ng per µg of BMP4.
---------------	---

Form	Lyophilised
-------------	-------------

Additional notes	The lyophilized protein is best-stored desiccated below 0°C. Reconstituted BMP-4 should be stored in working aliquots at -20°C. For long-term storage, it is recommended to add a carrier protein (0.1% BSA). Following reconstitution, this solution can be diluted into other aqueous buffers and stored at 4°C for 1 week or -20°C for future use.
-------------------------	---

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. This product is an active protein and may elicit a biological response in vivo, handle with caution.
------------------------------	---

Reconstitution	Centrifuge the vial prior to opening. Reconstitute to a concentration of 0.1 - 1.0 mg/ml in water.
-----------------------	--

General Info

Function	Induces cartilage and bone formation. Also act in mesoderm induction, tooth development, limb formation and fracture repair. Acts in concert with PTHLH/PTHLP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction.
Tissue specificity	Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines.
Involvement in disease	<p>Defects in BMP4 are the cause of microphthalmia syndromic type 6 (MCOPS6) [MIM:607932]; also known as microphthalmia and pituitary anomalies or microphthalmia with brain and digit developmental anomalies. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues (anophthalmia). In many cases, microphthalmia/anophthalmia occurs in association with syndromes that include non-ocular abnormalities. MCOPS6 is characterized by microphthalmia/anophthalmia associated with facial, genital, skeletal, neurologic and endocrine anomalies.</p> <p>Defects in BMP4 are the cause of non-syndromic orofacial cleft type 11 (OFC11) [MIM:600625]. Non-syndromic orofacial cleft is a common birth defect consisting of cleft lips with or without cleft palate. Cleft lips are associated with cleft palate in two-third of cases. A cleft lip can occur on one or both sides and range in severity from a simple notch in the upper lip to a complete opening in the lip extending into the floor of the nostril and involving the upper gum. OFC11 is an unusual anomaly consisting of a paramedian scar of the upper lip with an appearance suggesting that a typical cleft lip was corrected in utero.</p>
Sequence similarities	Belongs to the TGF-beta family.
Cellular localization	Secreted > extracellular space > extracellular matrix.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors