

Recombinant Human BMP-2

Description: Human Bone Morphogenetic Protein-2 (BMP-2) is a disulfide-bonded homodimeric protein with an apparent molecular weight of 26 kDa. BMP-2 regulates similarly to its nearest homologue BMP-4 diverse fundamental processes during embryonic development: BMP-2 and other BMP proteins have great potential for medical therapeutic applications, in particular because they allow or at least accelerate the ossification of extensive bone lesions. The amino acid sequence of recombinant human BMP-2 starts with *MQAKHKQ* (position 283) containing Met from E. coli expression vector. BMP-2 lacks the natural N-terminus which results in a 15-20 fold increase of specific activity. BMP-2 is a heparin binding protein.

Source:	E. coli
Molecular Weight:	26 kDa
Specific activity:	$\sim 2.5 \times 10^3$ units/mg
Purity:	> 95% by SDS-PAGE and visualised by silver stain
Endotoxin level:	< 0.1 ng per μg of BMP-2
Stabilizer:	none
Buffer:	none
Formulation:	lyophilised

Biological Activity: Measured by the ability of BMP-2 to induce alkaline phosphatase production by C2C12 myogenic cells. The ED_{50} for this effect is typically 0.3-0.8 $\mu\text{g}/\text{ml}$.

Reconstitution: The lyophilised BMP-2 is best soluble in 50 mM acetic acid at a concentration of 0.1 mg/ml but should also be soluble in most aqueous buffers or d. water ($> 0,1$ mg/ml) when the pH is below 6.0. (Above pH 6.0 the solubility is low, but could be increased by addition of 1 M NaCl or 30% 2-propanol – not optimum).

Stability: Lyophilised samples are stable for greater than six months at -20°C to -70°C . Reconstituted BMP-2 should be stored in working aliquots at -20°C . **Avoid repeated freeze-thaw cycles!**

Usage: BMP-2 is offered for research use. Not for drug use. **Not for human use!**

Catalogue number:	CYT-26953	Size:	5 μg
Units/vial:	1.25×10^1	Range:	0.3-0.8 $\mu\text{g}/\text{ml}$

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