

SUPPLEMENTARY FIGURES

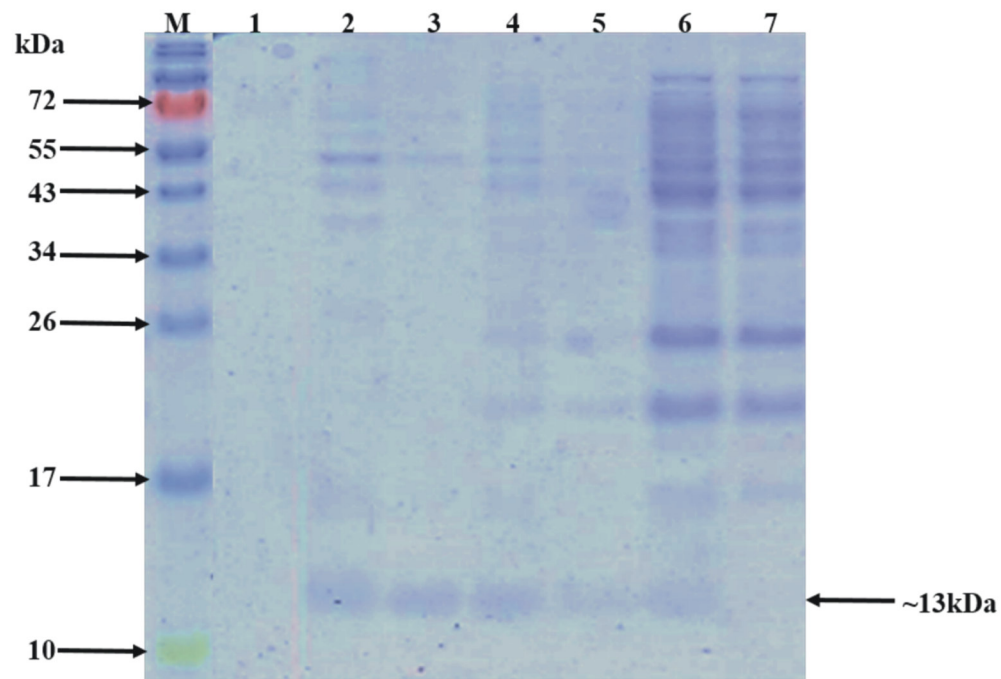


Figure S1: Time span of rhBMP2 monomer at 37°C in 2xYT medium in SCK6 strain. Lane M, Protein marker; Lane 1, Pre-induction; Lane 2-7, 4, 8, 12, 16, 20 and 24 hours post induction samples respectively. Maximum expression shown at 12 hours of fermentation.

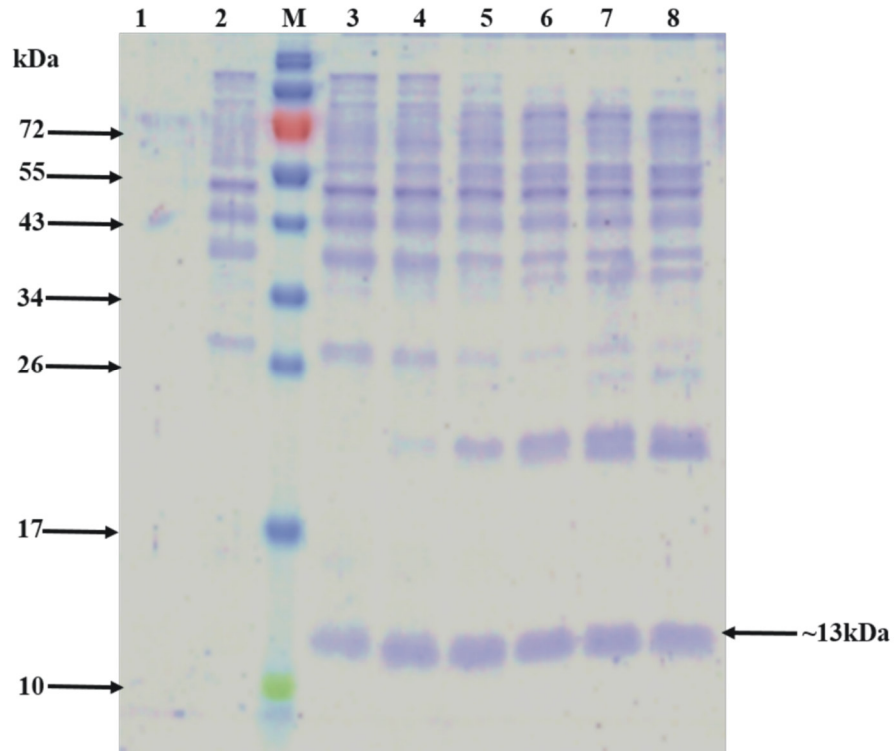


Figure S2: Time span of rhBMP2 monomer at 30°C in 2xYT medium in SCK6 strain. Lane M, Protein marker. Lane 1, Pre-induction; Lane 2-8, 4, 6, 8, 12, 16, 20, 24 hours post induction respectively. Maximum secretory expression (~35%) shown at 20 hours of fermentation.

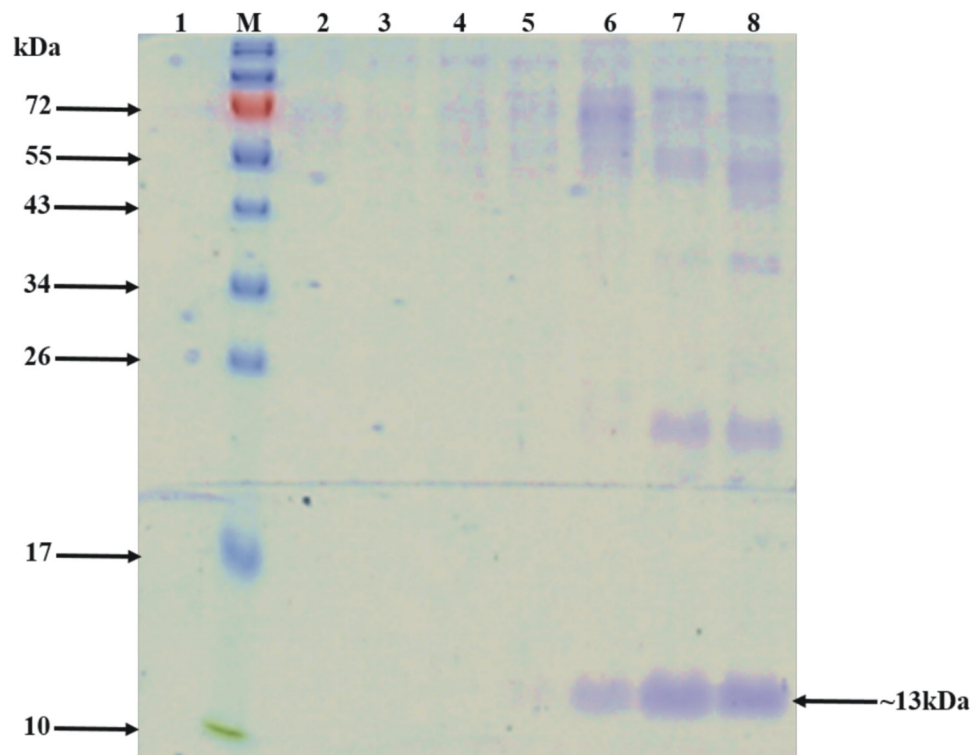


Figure S3: Time span of rhBMP2 monomer in 2xYT medium at 37°C in WB600 strain. Lane M, Protein marker. Lane 1, Pre-induction; Lane 2-8, 4, 6, 8, 12, 16, 20 and 24 hours post induction samples. Maximum expression (~45%) observed at 24 hours of fermentation.

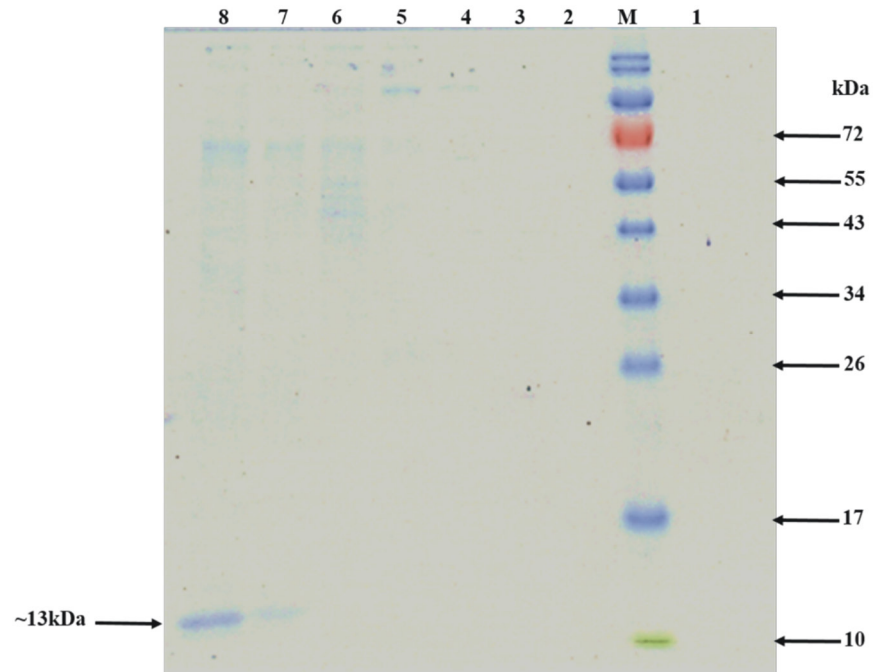


Figure S4: Time span of rhBMP2 monomer in 2xYT medium at 30°C in WB600 strain. Lane M, Protein marker; Lane 1, Pre-induction; Lane 2-8, 4, 6, 8, 12, 16, 20 and 24 hours post induction samples. Maximum expression observed only at 24 hours of fermentation.

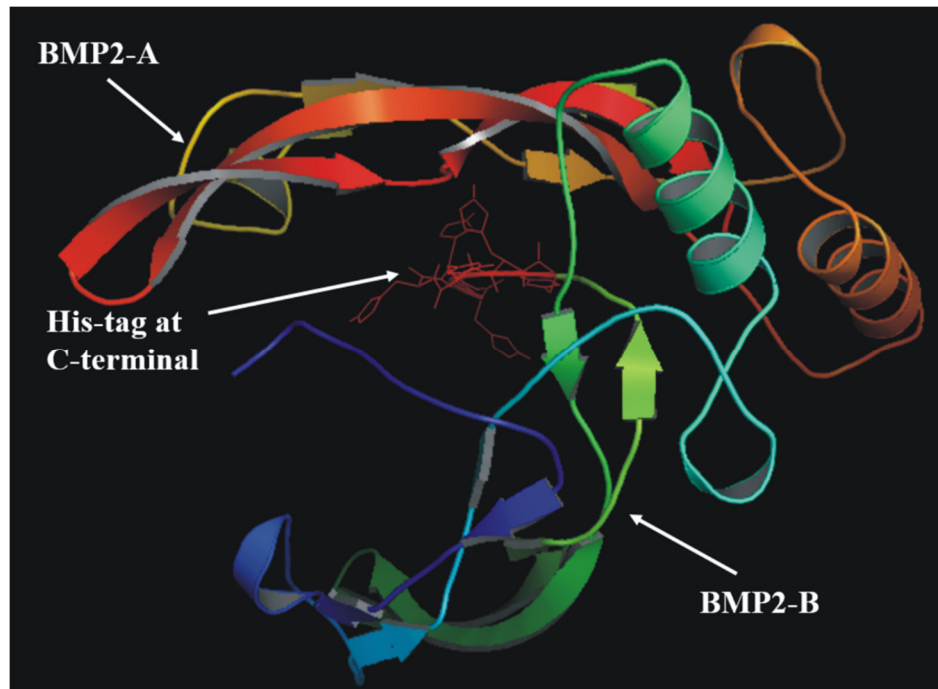


Figure S5: Computational model of rhBMP2 dimer. The rhBMP2 monomer with His-tag at C-terminal was generated by I-Tasser web server (<https://zhanglab.ccmb.med.umich.edu/I-TASSER/>) and protein-protein interaction was predicted by Haddock web server (<http://haddock.science.uu.nl/services/HADDOCK/>). Model shows the C-terminal at His-tag is buried in the interior of the protein. Due to masking of His-tag, rhBMP2 was not purified by Nickel-NTA affinity chromatography.

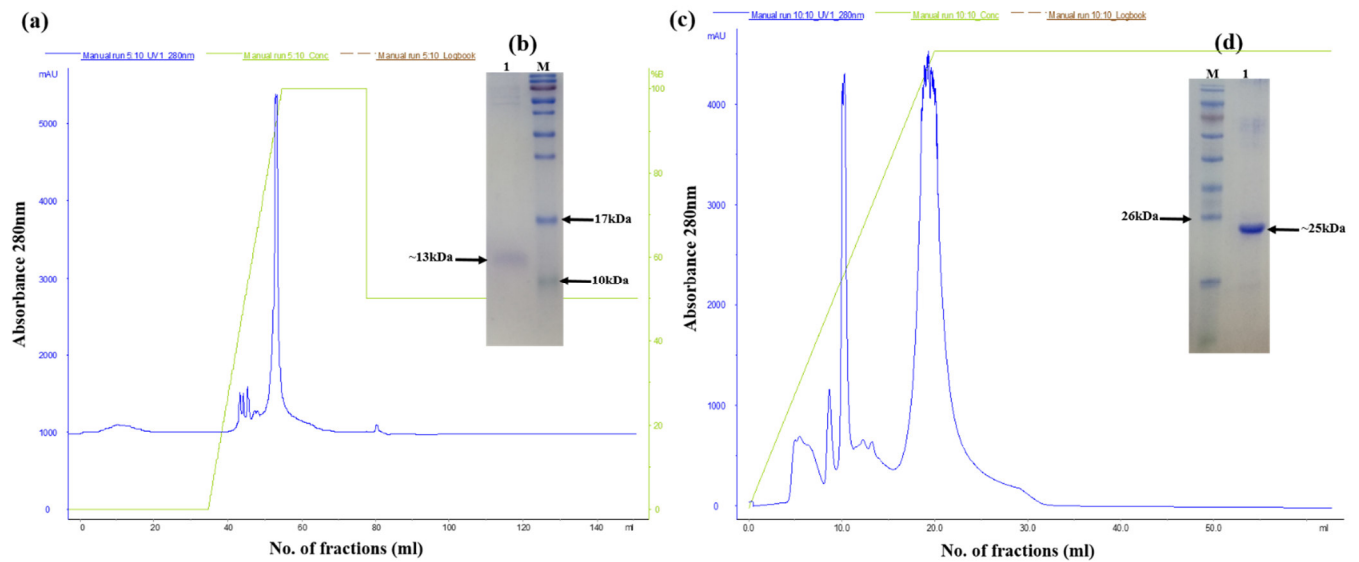


Figure S6: Purification of rhBMP2 monomer and dimer by anion-exchange chromatography. (a) Chromatogram of rhBMP2 monomer showing peak at ~0.9M NaCl concentration. X-axis showing the volume of fractions (ml) and Y-axis showing the absorbance at 280nm. (b) Purified rhBMP2 monomer was run on 18% SDS-PAGE showing ~90% purity. Lane M, Protein marker; Lane 1, purified rhBMP2 monomer. (c) Chromatogram of rhBMP2 dimer showing peak at ~0.6M NaCl concentration. (d) Purified rhBMP2 dimer run on 18% SDS-PAGE showing ~ 80% purity. Lane M, Protein marker; Lane 1, purified rhBMP2 dimer.