

## BSPII Protein, Human, Recombinant (His)

### General Information

Synonyms:	SP-II;BSP;SP II;BSP-II;IBSP;SPII;BSP II;BNSP;BSP 2
Protein Construction:	Phe17-Gln317
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P21815
Molecular Weight:	34.3 kDa (predicted). Due to glycosylation, the protein migrates to 70-80 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

IBSP (Integrin Binding Sialoprotein) is a Protein Coding gene. Diseases associated with IBSP include Fibrous Dysplasia and Chondromalacia. Among its related pathways are Degradation of the extracellular matrix and Cytoskeletal Signaling. The protein encoded by this gene is a major structural protein of the bone matrix. It constitutes approximately 12% of the noncollagenous proteins in human bone and is synthesized by skeletal-associated cell types, including hypertrophic chondrocytes, osteoblasts, osteocytes, and osteoclasts.

Reference

Benz F, et al. Serum levels of bone sialoprotein correlate with portal pressure in patients with liver cirrhosis. PLoS One. 2020 Apr 17;15(4):e023170doi: 10.1371/journal.pone.023170PMID: 32302330; PMCID: PMC7164617.

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