

## HSP27/HSPB1 Protein, Human (His)

Cat. No.:	HY-P74878
Synonyms:	Heat shock protein beta-1; HspB1; HSP 27; SRP27; HSPB1; HSP28
Species:	Human
Source:	E. coli
Accession:	P04792/NP_001531.1 (M1-K205)
Gene ID:	3315
Molecular Weight:	Approximately 28 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 20 mM HEPES, 0.1M KCl, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	HSP27/HSPB1, a small heat shock protein, serves as a molecular chaperone with a likely role in maintaining denatured proteins in a folding-competent state. Beyond its chaperone function, this protein plays a crucial role in stress resistance and contributes to actin organization. Its molecular chaperone activity is implicated in regulating various biological processes, including the phosphorylation and axonal transport of neurofilament proteins. HSP27/HSPB1 forms homooligomers and homodimers, the latter transitioning to a monomeric state upon activation. Additionally, it participates in heterooligomer formation with HSPB6. The protein interacts with alpha- and beta-tubulin, and it engages in molecular associations with TGFB111, CRYAB, HSPB8, and HSPBAP1, thereby contributing to a network of protein-protein interactions that underlie its diverse cellular functions.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA