

# Human HSP90AA1 / HSP90 Protein



Sino Biological  
Biological Solution Specialist

Catalog Number: 11445-HNCE

## General Information

### Gene Name Synonym:

EL52; HSP86; Hsp89; HSP89A; Hsp90; HSP90A; HSP90N; HSPC1; HSPCA; HSPCAL1; HSPCAL4; HSPN; LAP-2; LAP2

### Protein Construction:

A DNA sequence encoding the human HSP90 isoform 2 (NP\_005339.3) C-terminal segment, corresponding to amino acid sequence (Glu 535-Asp 732) was expressed and purified, with two additional aa (Gly & Pro) at the N terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gly

### Molecular Mass:

The recombinant human HSP90 (aa 535-732) consisting of 200 amino acids and has a calculated molecular mass of 22.6 kDa. It migrates as an 24 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

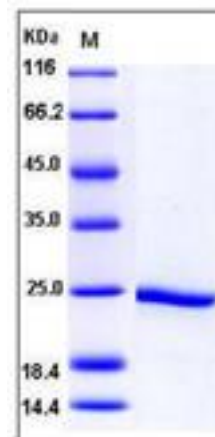
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Heat shock protein 90 (90 kDa heat-shock protein, HSP90) is a molecular chaperone involved in the trafficking of proteins in the cell. It is a remarkably versatile protein involved in the stress response and in normal homeostatic control mechanisms. HSP90 interacts with 'client proteins', including protein kinases, transcription factors and others, and either facilitates their stabilization and activation or directs them for proteasomal degradation. By this means, HSP90 displays a multifaceted ability to influence signal transduction, chromatin remodelling and epigenetic regulation, development and morphological evolution. HSP90 operates as a dimer in a conformational cycle driven by ATP binding and hydrolysis at the N-terminus. Disruption of HSP90 leads to client protein degradation and often cell death. Under stressful conditions, HSP90 stabilizes its client proteins and provides protection to the cell against cellular stressors such as in cancer cells. Especially, several oncoproteins act as HSP90 client proteins and tumor cells require higher HSP90 activity than normal cells to maintain their malignancy. For this reason, Hsp90 has emerged as a promising target for anti-cancer drug development.

## References

1. Pearl LH, *et al.* (2008) The Hsp90 molecular chaperone: an open and shut case for treatment. *Biochem J.* 410(3): 439-53.
2. Hahn JS. (2009) The Hsp90 chaperone machinery: from structure to drug development. *BMB Rep.* 42(10): 623-30.
3. Holzbeierlein JM, *et al.* (2010) Hsp90: a drug target? *Curr Oncol Rep.* 12(2): 95-101.

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