
MATERIAL DATA SHEET

Recombinant Human HSP90 α **Cat. # AP-160**

Members of the HSP90 family are essential chaperones found in all organisms from bacteria to humans. HSP90 complexes often interact with proteins in their native conformation and help to maintain/stabilize ligand-bound states. In this capacity, HSP90 plays a central role in function and turnover of many proteins involved in processes such as signal transduction, cell cycle control and apoptosis. HSP70 family members and HSP90 complexes frequently act in tandem, with the former participating in the folding of the client proteins and HSP90 stabilizing them in a way favorable for interaction with ligands. HSP90 forms complexes with an array of co-chaperones that both regulate its interaction with client proteins and stimulate its ATPase activity. By binding to different co-chaperones HSP90 acquires specificity for different families of client proteins. Many of the HSP90-client proteins are involved in tumor cell growth and HSP90 inhibitors are important as potential anticancer drugs. Inhibition of HSP90 also prevents the formation of protein aggregates in models of Parkinson disease, Huntington disease, and others. This recombinant protein may be used in conjunction with p23 (AP-170) in various in vitro protein refolding assays.

Product Information

Quantity:	50 μ g
MW:	85 kDa
Source:	<i>E. coli</i> -derived Accession # P07900
Stock:	X mg/ml (X μ M) in 50 mM HEPES pH 7.5, 50 mM KCl, 1 mM TCEP .
Purity:	>85%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: HSP90 α /HSP90AA1 is a molecular chaperone that assists in the folding of nascent polypeptides and the refolding of denatured proteins. Reaction conditions will need to be optimized for each specific application. **IMPORTANT:** HSP90 α /HSP90AA1 works in conjunction with the co-chaperones such as p23/PTGES3--both proteins are typically required for enzymatic activity. For *in vitro* use we recommend an initial co-chaperone concentration of 2-3 μ M, with an equimolar (or greater) concentration of HSP90 α /HSP90AA1.

Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

Literature

References:

1. Hartl F.U. & Hayer-Hartl M. (2009) Nat. Struc. Mol. Biol. **16**: 574-581.
2. Jackson S. E. (2013) Topics Curr. Chem. **328**: 155-240.
3. Pratt W.B., *et al.* (2008) J Biol Chem. **283**: 22885-22889.
4. Pratt W.B., *et al.* (2010) Exp. Biol. and Med. **235**: 278-289.
5. Waza M., *et al.* (2005) Nat. Med. **11**: 1088-95.

For research use only. Not for use in humans.