

MATERIAL DATA SHEET**DNAJB1/HSP40, human recombinant****Cat. # AP-110**

Heat shock protein 40 (HSP40, also known as DNAJB1) is the human homologue of the bacterial DnaJ heat shock protein. Heat shock proteins (HSPs) are a highly conserved family of stress response proteins. HSPs function primarily as molecular chaperones, facilitating the folding of other cellular proteins, preventing protein aggregation, or targeting improperly folded proteins to specific degradative pathways. Heat Shock Proteins are ubiquitously expressed in all organisms, and they are induced in response to various types of environmental stresses like heat, cold, and oxygen deprivation. HSP40 is a stress inducible chaperone that co-localizes with HSP70 and can bind unfolded proteins and prevent protein denaturation and aggregation. The conserved amino terminal J domain can interact with HSP70 and stimulate its ATPase activity. HSP40 and HSP70 are required to target some misfolded proteins to the Ubiquitin E3 ligase CHIP (Stub1) for subsequent ubiquitination. The protein contains a C-terminal 6-His tag.

Product Information

Quantity:	50 µg
Stock:	X mg/ml (X µM) in 50 mM Hepes pH 7.5, 100 mM NaCl, 1 mM TCEP
MW:	39 kDa
Purity:	> 95% by SDS-PAGE

Use & Storage

Use:	Typical enzyme concentration for use <i>in vitro</i> is dependent on specific application.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Chien V., <i>et. al.</i> (2010) <i>Biochem J.</i> 432 : 113-121 Hinault M.P., <i>et. al.</i> (2010) <i>J Biol. Chem.</i> 285 : 38173-38182 Minami Y., <i>et. al.</i> (1996) <i>J Biol. Chem.</i> 271 : 19617-19624 Qiu X.B., <i>et. al.</i> (2006) <i>Cell Mol. Life. Sci.</i> 63 : 2560-2570
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