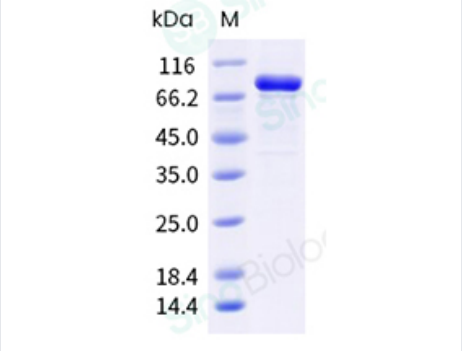
Hsp90 Alpha (HSP90ALPHA) Recombinant Protein

PRODUCT OVERVIEW

Product Name	Hsp90 alpha (Hsp90alpha), Recombinant Protein
Full Product Name	Hsp90 alpha Protein, Human, Recombinant (His Tag)
Product Gene Name	Hsp90alpha recombinant protein
Product Synonym Names	heat shock protein 90kDa alpha (cytosolic), class A member 1; EL52 Protein, Human; HSP86 Protein, Human; Hsp89 Protein, Human; HSP89A Protein, Human; Hsp90 Protein, Human; HSP90A Protein, Human; HSP90N Protein, Human; HSPC1 Protein, Human; HSPCA Protein, Human; HSPCAL1 Protein, Human; HSPCAL4 Protein, Human; HSPN Protein, Human; LAP-2 Protein, Human; LAP2 Protein, Human
Host	Baculovirus-Insect Cells
Form/Format	Lyophilized from sterile 20mM Pb, 300mM Nacl, 10% glycerol, 0.5mM PMSF, pH 7.0. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Purity/Purification	>= 90% as determined by SDS-PAGE.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Molecular Weight	84,660 Da
Chromosome Location	Chromosome: 14; NC_000014.8 (102547075..102606086, complement). Location: 14q32.33
OMIM	140571
3D Structure	ModBase 3D Structure for P07900
Species	Human
Predicted N Terminal	Met
Endotoxin	<1.0 EU per ug protein as determined by the LAL method.
Protein Construction	A DNA sequence encoding the Human HSP90AA1 (NP_005339.3)(Met1-Asp732) was expressed, with a polyhistidine tag at the N-terminus.
Related Product Information for Hsp90alpha recombinant protein	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 normal homoeostatic 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 remodeling 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 protects 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.
Product References and Citations for Hsp90alpha recombinant protein	Pearl LH, et al. (2008) The Hsp90 molecular chaperone: an open and shut case for treatment. Biochem J. 410(3): 439-53. Hahn JS. (2009) The Hsp90 chaperone machinery: from structure to drug development. BMB Rep. 42(10): 623-30.Holzbeierlein JM, et al. (2010) Hsp90: a drug target Curr Oncol Rep. 12(2): 95-101.Trepel J, et al. (2010) Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 10(8): 537-49.

Other Notes	Small volumes of Hsp90alpha recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Hsp90alpha purchase	MBS8125813 is a recombinant protein targeting Hsp90alpha. Also known as Hsp90 alpha Protein, Human, Recombinant (His Tag). Host: Baculovirus-Insect Cells.



Testing Data of Hsp90alpha recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Hsp90alpha. It may not necessarily be applicable to this product.

NCBI GI #	154146191
NCBI GeneID	3320
NCBI Accession #	NP_005339.3
UniProt Primary Accession #	P07900
UniProt Secondary Accession #	Q2PP14; Q5CAQ6; Q5CAQ7; Q9BVQ5; A8K500; B3KPJ9
UniProt Related Accession #	O75322; P07900; Q2VPJ6; Q86SX1; Q86U12; Q8TBA7; Q96HX7
GenBank Nucleotide #	NM_005348.3
NCBI Official Full Name	heat shock protein HSP 90-alpha isoform 2
NCBI Official Synonym Full Names	heat shock protein 90kDa alpha (cytosolic), class A member 1
NCBI Official Symbol	HSP90AA1
NCBI Official Synonym Symbols	HSPN; LAP2; HSP86; HSPC1; HSPCA; Hsp89; Hsp90; HSP89A; HSP90A; HSP90N; HSPCAL1; HSPCAL4; FLJ31884
UniProt Protein Name	Heat shock protein HSP 90-alpha
UniProt Synonym Protein Names	Heat shock 86 kDa; HSP 86; HSP86; Renal carcinoma antigen NY-REN-38
UniProt Gene Name	HSP90AA1
UniProt Synonym Gene Names	HSP90A; HSPC1; HSPCA; HSP 86; HSP86
UniProt Entry Name	HS90A_HUMAN
NCBI Protein Information	heat shock protein HSP 90-alpha; HSP 86; heat shock 86 kDa; heat shock 90kD protein 1, alpha; heat shock 90kDa protein 1, alpha; renal carcinoma antigen NY-REN-38; heat shock 90kD protein, alpha-like 4; heat shock 90kD protein 1, alpha-like 4

NCBI Summary for Hsp90alpha	HSP90 proteins are highly conserved molecular chaperones that have key roles in signal transduction, protein folding, protein degradation, and morphologic evolution. HSP90 proteins normally associate with other cochaperones and play important roles in folding newly synthesized proteins or stabilizing and refolding denatured proteins after stress. There are 2 major cytosolic HSP90 proteins, HSP90AA1, an inducible form, and HSP90AB1 (MIM 140572), a constitutive form. Other HSP90 proteins are found in endoplasmic reticulum (HSP90B1; MIM 191175) and mitochondria (TRAP1; MIM 606219) (Chen et al., 2005 [PubMed 16269234]).[supplied by OMIM]
UniProt Comments for Hsp90alpha	HSP90A: a molecular chaperone of the heat shock protein 90 family. Has ATPase activity. Known to interact with a wide variety of proteins including steroid hormone receptors, neuropeptide Y, FKBP51/54, and FKBP52. G protein-coupled receptor kinases are stabilized by interacting with HSP 90. Hsp70 and Hsp90 promote tau solubility and tau binding to microtubules, reducing insoluble tau phosphorylation of tau. Protein type: Heat shock protein; Chaperone Chromosomal Location of Human Ortholog: 14q32.33 Cellular Component: nucleoplasm; membrane; mitochondrion; cytoplasm; extracellular region; plasma membrane; melanosome; nucleus; cytosol Molecular Function: identical protein binding; protein binding; protein homodimerization activity; TPR domain binding; ATPase activity; nitric-oxide synthase regulator activity; unfolded protein binding; nucleotide binding; ATP binding Biological Process: axon guidance; receptor-mediated endocytosis; positive regulation of nitric oxide biosynthetic process; organelle organization and biogenesis; signal transduction; nitric oxide metabolic process; protein import into mitochondrial outer membrane; response to unfolded protein; mitochondrial transport; innate immune response; protein refolding; mitotic cell cycle; regulation of nitric-oxide synthase activity; vascular endothelial growth factor receptor signaling pathway; G2/M transition of mitotic cell cycle; chaperone-mediated protein complex assembly
Research Articles on Hsp90alpha	**1.** abrogation of the chaperone activity of Hsp90 affects P-body formation and the integrity of stress granules.
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