

Recombinant Cattle HSP90AB1 Protein, His-tagged

Cat. No. HSP90AB1-2723C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Cattle HSP90AB1 Protein (Met1-Asp724) with N-His tag was expressed in E. coli.
Species	Cattle
Source	E.coli
ProteinLength	Met1-Asp724
Description	Molecular chaperone that promotes the maturation, structural maintenance and proper regulation of specific target proteins involved for instance in cell cycle control and signal transduction. Undergoes a functional cycle linked to its ATPase activity. This cycle probably induces conformational changes in the client proteins, thereby causing their activation. Interacts dynamically with various co-chaperones that modulate its substrate recognition, ATPase cycle and chaperone function. Engages with a range of client protein classes via its interaction with various co-chaperone proteins or complexes, that act as adapters, simultaneously able to interact with the specific client and the central chaperone itself. Recruitment of ATP and co-chaperone followed by client protein forms a functional chaperone. After the completion of the chaperoning process, properly folded client protein and co-chaperone leave HSP90 in an ADP-bound partially open conformation and finally, ADP is released from HSP90 which acquires an open conformation for the next cycle. Apart from its chaperone activity, it also plays a role in the regulation of the transcription machinery. HSP90 and its co-chaperones modulate transcription at least at three different levels. They

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first alter the steady-state levels of certain transcription factors in response to various physiological cues. Second, they modulate the activity of certain epigenetic modifiers, such as histone deacetylases or DNA methyl transferases, and thereby respond to the change in the environment. Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression. Antagonizes STUB1-mediated inhibition of TGF-beta signaling via inhibition of STUB1-mediated SMAD3 ubiquitination and degradation. Promotes cell differentiation by chaperoning BIRC2 and thereby protecting from auto-ubiquitination and degradation by the proteasomal machinery. Main chaperone involved in the phosphorylation/activation of the STAT1 by chaperoning both JAK2 and PRKCE under heat shock and in turn, activates its own transcription. Involved in the translocation into ERGIC (endoplasmic reticulum-Golgi intermediate compartment) of leaderless cargos (lacking the secretion signal sequence) such as the interleukin 1/IL-1; the translocation process is mediated by the cargo receptor TMED10.

Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 84.5 kDa Accurate Molecular Mass: 84 kDa
Purity	> 97%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and

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store at -80 centigrade for 12 months.

Storage Buffer PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.

Reconstitution Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name HSP90AB1 heat shock protein 90 alpha family class B member 1 [Bos taurus (cattle)]

Official Symbol HSP90AB1

Synonyms HSP90AB1; heat shock protein 90 alpha family class B member 1; HSPCB; heat shock protein HSP 90-beta; heat shock 90 kDa protein; heat shock 90kDa protein 1, beta; heat shock protein 90kDa alpha (cytosolic), class B member 1

Gene ID 767874

mRNA Refseq NM_001079637

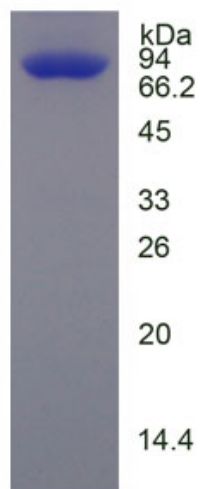
Protein Refseq NP_001073105

UniProt ID Q76LV1

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