

## Product datasheet for **MC221078**

### Hsp90ab1 (NM\_008302) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hsp90ab1 (NM_008302) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Hsp90ab1
Synonyms:	90kDa; AL022974; C81438; Hsp84; Hsp84-1; Hsp90; Hspcb
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**Fully Sequenced ORF:** >MC221078 representing NM\_008302  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGAGACCTTTGCCTTCAGGCAGAAATGCCAGC  
 TCATGTCCCTCATCATCAACACTTTCTATTCAAACAAGGAGATTTCTCCGCGAGTTGATCTCTAATGC  
 TTCAGATGCCCTGGACAAGATTCGATATGAGAGCCTGACGGACCTTCTAAGTTGGACAGTGGGAAAGAG  
 CTGAAAATTGACATCATCCCAACCCTCAGGAGCGCACGCTGACTTTGGTGGACACAGGCATTGGCATGA  
 CCAAGGCTGACCTCATTAAACCTGGGAACATTGCTAAGTCTGGCACGAAGGCGTTTATGGAGGCTCT  
 CCAGGCTGGTGCAGACATCTCCATGATCGGGCAGTTTGGTGTGGATTCTACTCGGCTATCTAGTTGCA  
 GAGAAAGTGGTTGTGATCACGAAGCACAATGATGATGAGCAGTATGCCTGGGAGTCGTCTCGGGTGGCT  
 CCTTACCCTCCGGCAGACCATGGTGAAGCCATTGGCCGGGTACCAAAGTATCCTTACCTCAAAGA  
 AGACCAGACAGAGTACTTGGAGGAGAGGGTCAAGGAAGTGGTGAAGAAACATTTCGAGTTTATAGGC  
 TATCCCATCACCTCTATTTGGAGAAGGAACGGGAGAAGGAGATCAGTATGATGAGGCAGAGGAAGAGA  
 AAGGTGAGAAAGAGGAGGAAGATAAGGAGGATGAGGAGAAGCCTAAGATTGAAGATGTGGATCCGATGA  
 GGAAGATGACAGCGGCAAGACAAGAAAAAGAAAAAAGAAAGATCAAAGAGAAGTACATTGACCAGGAG  
 GAGCTGAACAAGACAAAGCCTATCTGGACCAGAAACCCGGATGACATCACGCAGGAGGAGTATGGCGAAT  
 TCTATAAGAGCCTACCAATGACTGGGAGGACCACTTGGCAGTCAAGCACTTCTCTGTAGAAGGTGAGTT  
 GGAATTCAGGGCATTGCTCTTATTCCCGCGGGCTCCCTTCGACCTTTTGGAGAACAAGAAGAAGAAG  
 AACAACATCAAATTGTATGTCCGCCGTGTTCATCATGGACAGCTGTGACGAGCTGATACCTGAGTACC  
 TCAACTTTATCCGCGGTGTGGTTGACTCCGAGGACCTGCCCTGAACATCTCCCGGAGATGCTGCAGCA  
 GAGCAAGATCCTGAAGGTCAATCCGCAAGAACATCGTCAAGAAAGTGCCTGGAGCTTCTCCGAGCTGGCT  
 GAGGACAAGGAGAACTACAAGAAGTTCTATGAGGCCTTCTCAAAAAATTTAAAGCTTGAATTCATGAAG  
 ATTCCACTAACCGACGCCGCTCTCTGAGCTCCTTCGCTATCACACCTCTCAGTCTGGAGATGAGATGAC  
 CTCCTTGTGAGATATGTGTCTCGCATGAAGGAGACCCAGAAGTCCATCTACTATACACTGGTGGAGAGC  
 AAAGAGCAAGTGGCAACTCTGCCTTTGTGGAGCGAGTGCAGGAGCGGGCTTCGAGGTGGTGTATATGA  
 CTGAGCCTATTGACGAGTACTGCGTGCAGCAGCTCAAGGAGTTTGTGGGAGAGCCTGGTCTCAGTGAC  
 TAAGGAGGGCCTGGAGCTACCAGAGGACGAGGAAGAGAAGAAGAAATGGAGGAGAGCAAGGCAAAGTTT  
 GAGAATCTCTGCAAGCTCATGAAGGAGATCTTGGACAAGAAGGTTGAAAAGGTGACAATCTCCAATAGGC  
 TTGTGTCTTACCCTGCTGCATTGTGACAAGCACCTATGGCTGGACAGCCAAACATGGAACGGATCATGAA  
 GGCCAGGCACTGCGAGACAACCTACAATGGGCTACATGATGGCCAAAAAACACCTGGAGATCAACCTT  
 GACCACCCATCGTGGAGACCCTGCGGCAGAAGGCTGAGGCAGACAAAAACGACAAAGCTGTCAAGGACC  
 TGGTGGTGTGCTGCTTTGAAACTGCTCTGCTCTCCTCTGGTTTCTCACTTGGAGTCCCCAAACCCACTC  
 CAACCGCATCTACCGCATGATTAAGTAACTAGGCTGGGCATCGATGAAGATGAGGTCACTGCAGAGGAGCCC  
 AGTGTGCTGTTCTGATGAGATCCCCCTCTGGAAGGCGATGAGGATGCCTCGCGCATGGAAGAGGTGG  
**ATTAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_008302  
**Insert Size:** 2175 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_008302.3](#), [NP\\_032328.2](#)

**RefSeq Size:** 2507 bp

**RefSeq ORF:** 2175 bp

**Locus ID:** 15516

**UniProt ID:** [P11499](#)

**Cytogenetics:** 17 22.59 cM

**Gene Summary:**

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 that is 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. In the first place, they 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 that is involved in the phosphorylation/activation of the STAT1 by chaperoning both JAK2 and PRKCE under heat shock and in turn, activates its own transcription.[UniProtKB/Swiss-Prot Function]