

## Product datasheet for **MG210348**

### Hsp90aa1 (BC049124) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hsp90aa1 (BC049124) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Hsp90aa1
Synonyms:	86kDa, 89kDa
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG210348 representing BC049124  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCTGAGGAAACCCAGACCCAAGACCAACCAATGGAGGAGGAGGAGGTCGAGACCTTTGCCTTTTCAGG  
 CAGAAATTGCCAGTTAATGTCCTTGATCATCAATACCTTCTACTCGAACAAAGAGATCTTTCTGAGGGA  
 GCTCATCTCCAATTCATCGGACGCTCTGGATAAAATCCGTTACGAGAGCCTGACGGACCCAGTAAACTG  
 GACTCGGGGAAGGAGCTGCACATCAATCTCATTCCAGCAAACAGGACCGAACCTGACCATTGTGGATA  
 CCGGGATTGGAATGACCAAGGCCGACTTGATCAATAACCTTGGCACCATTGCCAAGTCGGGCACCAAAGC  
 CTTTCATGGAGGCTTTGCAGGCTGGTGCAGATATCTCTATGATTGGCCAGTTTGGTGTGGTTTTACTCT  
 GCCTATTTGGTTGCTGAGAAAGTACTGTCATCACGAAGCATAACGACGATGAGCAGTATGCCTGGGAGT  
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 CTTGCATCTGAAAGAAGACCAAACAGAGTATTTGGAGGAAAGGAGAATAAAGGAGATCGTGAAGAAGCAT  
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 AGGCTGAAGAAAAGGAAGAGAAAAGGAAGAGAAAAGAAAAGAAAAGGAGTCTGATGATAAACCTGA  
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 GAGGATGATCCTACTGTGGATGACACCAGTGTCTGTAAGTGAAGAAATGCCTCCCTGGAAAGGAGATG  
 ACGACACATCACGCATGGAAGAAGTAGAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

Protein Sequence: >MG210348 representing BC049124  
 Red=Cloning site Green=Tags(s)

MPEETQTQDQPMEEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELISNSSDALDKIRYESLTDPSKL  
 DSGKELHINLIPSKQDRTLTIVDTGIGMTKADLINNLTIAKSGTKAFMEALQAGADISMIGQFVGVFYS  
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 SQFIGYPITLFLVEKERDKEVSDDEAEKEEKEEKEEKEEKEEKEEKEEKEEKEEKEEKEEKEEKEEKEE  
 IKEKYIDQEELNKTPIWTRNPDDITNEEYGEFYKSLTNDWEEHLAVKHFSVEGQLEFRALLFVPRRAPF  
 DLFENRKKKNNIKLYVRRVIFMDNCEELIPEYLNFIIRGVVDSDELPLNISREMLQQSKILKVIRKLVKK  
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 HIYFITGETKDQVANSFVERLRKHGLEVIYMIPIDEYCVQQLKEFEGKTLVSVTKEGLELPEDEEEKK  
 KQEKKTKFENLCKIMKDILEKKVEKVVSNRLVTSPCCIVTSTYGWTANMERIMKAQALRDNSTMGYMA  
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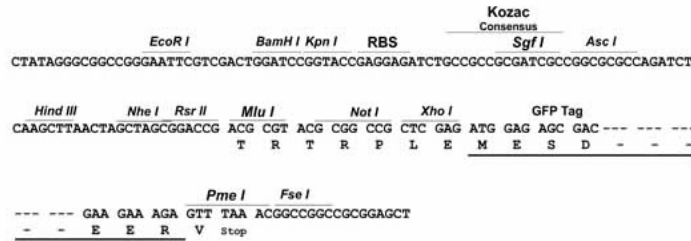
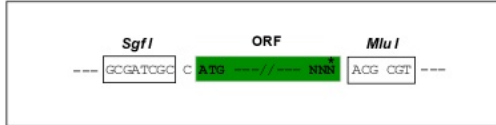
TRTRPLE - GFP Tag - V

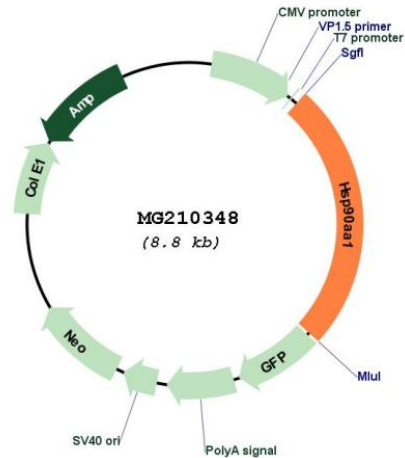
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** BC049124

**ORF Size:** 2201 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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:** [BC049124](#), [AAH49124](#)

**RefSeq Size:** 2869 bp

**RefSeq ORF:** 2201 bp

**Locus ID:** 15519

**Cytogenetics:** 12 60.75 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 which is essential for its chaperone 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. Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes. Antagonizes STUB1-mediated inhibition of TGF-beta signaling via inhibition of STUB1-mediated SMAD3 ubiquitination and degradation.[UniProtKB/Swiss-Prot Function]