

## Product datasheet for **TF501015**

### Hsp90aa1 Mouse shRNA Plasmid (Locus ID 15519)

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | shRNA Plasmids   |
| Product Name:             | Hsp90aa1 Mouse shRNA Plasmid (Locus ID 15519)  |
| Locus ID:                 | 15519  |
| Synonyms:                 | 86kDa; 89kDa; AL024080; AL024147; hsp4; Hsp86-1; Hsp89; Hsp90; Hspca   |
| Vector:                   | pRFP-C-RS (TR30014)  |
| E. coli Selection:        | Chloramphenicol (34 ug/ml)   |
| Mammalian Cell Selection: | Puromycin  |
| Format:                   | Retroviral plasmids  |
| Components:               | Hsp90aa1 - Mouse, 4 unique 29mer shRNA constructs in retroviral RFP vector(Gene ID = 15519). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pRFP-C-RS Vector, TR30015, included for free.  |
| RefSeq:                   | <a href="#">BC046614</a> , <a href="#">BC049124</a> , <a href="#">BC094024</a> , <a href="#">NM_010480</a> , <a href="#">NM_010480.1</a> , <a href="#">NM_010480.2</a> , <a href="#">NM_010480.3</a> , <a href="#">NM_010480.4</a> , <a href="#">NM_010480.5</a> , <a href="#">BC046614.1</a> , <a href="#">BC009003</a> , <a href="#">BC018232</a> , <a href="#">BC037151</a> , <a href="#">BC057287</a> , <a href="#">BC090391</a> |
| UniProt ID:               | <a href="#">P07901</a>   |



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**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]

**shRNA Design:**

These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact [techsupport@origene.com](mailto:techsupport@origene.com). If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).

**Performance Guaranteed:**

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).