

## Product datasheet for **SC116766**

### HSP70-1A (HSPA1A) (NM\_005345) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HSP70-1A (HSPA1A) (NM_005345) Human Untagged Clone
Tag:	Tag Free
Symbol:	HSP70-1A
Synonyms:	HEL-S-103; HSP70-1; HSP70-1A; HSP70-2; HSP70.1; HSP70.2; HSP70I; HSP72; HSPA1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC116766 sequence for NM\_005345 edited (data generated by NextGen Sequencing)

```

ATGGCCAAAGCCGCGGATCGGCATCGACCTGGGCACCACCTACTCCTGCGTGGGGTG
TTCCAACACGGCAAGGTGGAGATCATCGCCAACGACCAGGGCAACCGCACCACCCAGC
TACGTGGCCTTACGGACACCGAGCGGCTCATCGGGATGCGGCCAAGAACCAGGTGGCG
CTGAACCCGCAGAACACCGTGTGTTGACGCGAAGCGGCTGATCGGCCGCAAGTTCGGCGAC
CCGGTGGTGCAGTCGGACATGAAGCACTGGCCTTCCAGGTGATCAACGACGGAGACAAG
CCCAAGGTGCAGGTGAGCTACAAGGGGGACACCAAGGCATTCTACCCCGAGGAGATCTCG
TCCATGGTGTGACCAAGATGAAGGAGATCGCCGAGGCGTACCTGGGCTACCCGGTGACC
AACGCGGTGATCACCGTCCGGCCTACTTCAACGACTCGCAGCGCCAGGCCACCAAGGAT
GCGGGTGTGATCGCGGGGCTCAACGTGCTGCGGATCATCAACGAGCCACGGCCGCCGCC
ATCGCCTACGGCCTGGACAGAACGGGCAAGGGGGAGCGCAACGTGCTCATCTTTGACCTG
GGCGGGGGCACCTTCGACGTGTCCATCCTGACGATCGACGACGGCATCTTCGAGGTGAAG
GCCACGGCCGGGACACCACCTGGGTGGGGAGGACTTTGACAACAGGCTGGTGAACCAC
TTCGTGGAGGAGTTCAAGAGAAAACACAAGAAGGACATCAGCCAGAACAAGCGAGCCGTG
AGGCGGCTGCGCACCCGCTGCGAGAGGGCAAGAGGACCCTGTCTCCAGCACCCAGGCC
AGCCTGGAGATCGACTCCCTGTTTGAGGGCATCGACTTCTACACGTCCATCACCAGGGCG
AGGTTTCGAGGAGCTGTGCTCCGACCTGTTCCGAAGCACCTGGAGCCCGTGGAGAAGGCT
CTGCGCGACGCCAAGCTGGACAAGGCCAGATTACGACCTGGTCTGGTGGGGGCTCC
ACCCGCATCCCAAGGTGCAGAAGCTGTGTCAGGACTTCTTCAACGGGCGCGACCTGAAC
AAGAGCATCAACCCGACGAGGCTGTGGCTACGGGGCGGGTGCAGGGCGGCCATCCTG
ATGGGGGACAAGTCCGAGAACGTGCAGGACCTGCTGCTGCTGGACGTGGTCCCTGTGCG
CTGGGGCTGGAGACGGCCGGAGGCGTGATGACTGCCCTGATCAAGCGCAACTCCACCATC
CCACCAAGCAGACGCAGATCTTACCACCTACTCCGACAACCAACCCGGGGTGTGATC
CAGGTGTACGAGGGCGAGAGGGCCATGACGAAAGACAACAATCTGTTGGGGCGTTCGAG
CTGAGCGGCATCCCTCCGGCCCCAGGGGCGTGCCCGAGATCGAGGTGACCTTCGACATC
GATGCCAACGGCATCCTGAACGTACGGCCACGGACAAGAGCACCGCAAGGCCAACAAG
ATCACCATACCAACGACAAGGGCCGCTGAGCAAGGAGGAGATCGAGCGCATGGTGCAG
GAGGCGGAGAAGTACAAAGCGGAGGACGAGGTGCAGCGCGAGAGGGTGTGAGCCAAGAAC
GCCCTGGAGTCTACGCCTTCAACATGAAGAGCGCCGTGGAGGATGAGGGGCTCAAGGGC
AAGATCAGCGAGGCSGACAAGAAGAAGGTGCTGGACAAGTGTCAAGAGGTGATCTCGTGG
CTGGACGCCAACACCTTGGCCGAGAAGGACGAGTTTGAGCACAAGAGGAAGGAGCTGGAG
CAGGTGTGTAACCCCATCATCAGCGGACTGTACCAGGGTGCCGGTGGTCCCGGGCCTGGG
GGCTTCGGGGCTCAGGTCCTCAAGGGAGGGTCTGGGTGAGGCCACCATTGAGGAGGTA
GATTAG
    
```

Clone variation with respect to NM\_005345.5  
 222 t=>c;330 g=>c;1695 g=>s

**5' Read Nucleotide Sequence:**

```
>OriGene 5' read for NM_005345 unedited
ATTTTGTAAATACGACTACTATAGGGCGGCCGGAATTCGGCACGAGGCTGCGACAGTCC
ACTACCTTTTTCGAGAGTGACTCCCGTTGTCCCAAGGCTTCCCAGAGCGAACCTGTGCGG
CTGCAGGCACCGGCGCGTTCGAGTTTCCGGCGTCCGGAAGGACCGAGCTTCTTCGCGGAT
CCAGTGTTCGGTTTCCAGCCCCAATCTCAGAGCCGAGCCGACAGAGAGCAGGGAACCGG
CATGGCCAAAGCCGCGGCGATCGGCATCGACCTGGCACCACTACTCCTGCGTGGGGGT
GTTCCAACACGGCAAGGTGGAGATCATCGCCAACGACCAGGGCAACCGCACCCCCAG
CTACGTGGCCTTACGGACACCGAGCGGCTCATCGGGGATGCGGCCAAGAACCAGGTGGC
GCTGAACCCGCAACACCGTGTGTTGACGCGAAGCGGCTGATCGGCCGCAAGTTCGCGCA
CCCAGTGGTGCAGTCGGACATGAAGCACTGGCCTTTCAGGTGATCAACGACGGAGACAA
GCCCAAGGTGCAGGTGAGCTACAAGGGGACACCAAGGCATTCTACCCGAGGAGATCTC
GTCCATGGTGCTGACCAAGATGAAGGAGATCGCCGAGGCGTACCTGGGCTACCCGGTGC
AACCGGTGATCACCGTCCCGCCTACTTCAACGACTCGCAGCCGACGGCCACCAAGGAT
GCNGNNTGTGATCGCGNGCTCAAACGTGCTGCGGATCATCAACGAGCCACGGNGCNC
GCCATTGCTACGNGCTGNACAGAACGGGCAGGGGGAGCGCACGTGCTCATCTTTGACC
CTGGCGGGCACCTTNCGACGTGCCTTCTTGACGATCGACGACGGAT
```

**3' Read Nucleotide Sequence:**

```
>OriGene 3' read for NM_005345 unedited
GCTATGGACCGGCGGCCGAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTGAATTTAAAGTTTATTTACTTTGAAGTAACCACTTAAAAATGGCCTGAGTTA
AGTGATATAAAAAAGAAGAAATAGTCGTAAGATGGCAGTATAAATTCATCTCTGCATGTAG
AAACCGGAAAAAAGCAAGTTCAGTACTTACCAAAAAATTTCAACATTGCAAACACAGGA
AATTGAGAACTGACAAACAGAAATACTAGGAAATGCAAAGTCTTGAAGCTCCAAAACAAA
AACAGCAATCTTGAAAGGCCCTAATCTACCTCCTCAATGGGGGGCCTGACCCAGACC
CTCCCTTGGGACCCTGAGCCCCGAAGCCCCAGGCCCGGGACCACCGGCACCCTGGTACA
GTCCGCTGATGATGGGGTTACACACCTGCTCCAGCTCCTTCTTTTGTGCTCAAACCTCGT
CCTTCTCGGCCAAGGTGTTGGCGTCCAGCCACGAGATGACCTCTTGACACTTGTTCAGAA
CCTTNTTNTTGTCCGCTCGTGTGATCTTGCCCTTGAGCCCCTTATCCTTCACGGCGCTCT
TCATGTTGAAGGCGTAAGACTCCAGGGCCTTCTGGTTGACACCCTCTCGCGCTGCACCT
CGGCCTCCGCTTTGTACTTCTCCGCTACTGTACCATGCGCTCGATCTCCTCCTTGCTTA
GGCGGCCCTTGTNGTTTGTGATGGAGATCTTGTGGCCTTGCCGGCCTTTGCCCTGGCC
GTGACGTTAAAGATGCCGTTGGCATCGATGTGCAAAGTCACTGAACCTGGGCCCGCCCC
TGGGGCCCGTAGGATGCCGCTCATTTTCGATTGCCCCACGATTGTTGTCTTCGCATGGCC
TTTTGCCCTTGTAACTGGATAGCCCCGGTTGTTGTCGAGAAGTG
```

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_005345

**Insert Size:**

2550 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\\_005345.4](#), [NP\\_005336.2](#)

**RefSeq Size:** 2383 bp

**RefSeq ORF:** 1926 bp

**Locus ID:** 3303

**UniProt ID:** [P08107](#)

**Cytogenetics:** 6p21.33

**Domains:** HSP70

**Protein Pathways:** Antigen processing and presentation, Endocytosis, MAPK signaling pathway, Prion diseases, Spliceosome

**Gene Summary:** This intronless gene encodes a 70kDa heat shock protein which is a member of the heat shock protein 70 family. In conjunction with other heat shock proteins, this protein stabilizes existing proteins against aggregation and mediates the folding of newly translated proteins in the cytosol and in organelles. It is also involved in the ubiquitin-proteasome pathway through interaction with the AU-rich element RNA-binding protein 1. The gene is located in the major histocompatibility complex class III region, in a cluster with two closely related genes which encode similar proteins. [provided by RefSeq, Jul 2008]