

Product datasheet for **RC207795**

HSPA6 (NM_002155) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HSPA6 (NM_002155) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HSPA6
Synonyms:	HSP70B'
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC207795 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAGGCCCCACGGGAGCTCGCGGTGGGCATCGACTGGGCACCACCTACTCGTGGTGGGCGTGTTC
 AGCAGGGCCGCGTGGAGATCCTGGCCAACGACCAGGGCAACCGCACCCAGCTACGTGGCCTTCAC
 CGACACCGAGCGGCTGGTCGGGGACCGGCCAAGAGCCAGGCGGCCCTGAACCCCAACAACCGTGTTC
 GATGCCAAGCGGCTGATCGGGCGCAAGTTCGCGGACACCACGGTGCAGTCGGACATGAAGCACTGGCCCT
 TCCGGGTGGTGGAGCGAGGGCGGCAAGCCCAAGGTGCGCGTATGCTACCGCGGGGAGGACAAGACGTCTA
 CCCCAGGAGATCTCGTCCATGGTGTGAGCAAGATGAAGGAGACGGCCGAGGCGTACCTGGCCAGCCC
 GTGAAGCACGAGTATCACCGTCCCGCTATTTCAATGACTCGCAGCGCCAGGCCACCAAGGACGCGG
 GGGCCATCGCGGGGCTCAACGTGTTCGGATCATCAATGAGCCCACGGCAGCTGCCATCGCTATGGGT
 GGACCGCGGGGGCGGGAGAGCGCAACGTGCTCATTTTTGACCTGGGTGGGGGCACCTTCGATGTGTCG
 GTTCTCTCCATTGACGCTGGTGTCTTTGAGGTGAAAGCCACTGCTGGAGATACCCACCTGGGAGGAGAGG
 ACTTCGACAACCGGCTCGTGAACCACTTCATGGAAGAATTCGGCGGAAGCATGGGAAGGACCTGAGCGG
 GAACAAGCGTGCCCTGCGCAGGCTGCGCACAGCCTGTGAGCGCGCAAGCGCACCCCTGTCCTCCAGCACC
 CAGGCCACCTGGAGATAGACTCCCTGTTTCGAGGGCGTGGACTTCTACACGTCCATCACTCGTCCCGCT
 TTGAGGAACTGTGCTCAGACCTTTCGCGACACCCTGGAGCCGGTGGAGAAGGCCCTGCGGGATGCCAA
 GCTGGACAAGGCCAGATTATGACGTCGTCTGGTGGGGGCTCCACTCGCATCCCCAAGTGCAGAAG
 TTGCTGCAGGACTTCTCAACGGCAAGGAGCTGAACAAGAGCATCAACCCTGATGAGGCTGTGCCATG
 GGGTGTGTCAGGCGGCCGTGTGATGGGGGACAAATGTGAGAAAGTGCAGGATCTCCTGCTGCTGGA
 TGTGGCTCCCCTGTCTCTGGGGCTGGAGACAGCAGGTGGGGTGATGACCACGCTGATCCAGAGGAACGCC
 ACTATCCCCACCAAGCAGACCCAGACTTTCACCACCTACTCGGACAACCAGCCTGGGGTCTTCATCCAGG
 TGTATGAGGGTGAGAGGGCCATGACCAAGGACAACAACCTGCTGGGGCGTTTTGAACTCAGTGGCATCCC
 TCCTGCCCCACGTGGAGTCCCCAGATAGAGGTGACCTTTGACATTGATGCTAATGGCATCTGAGCGTG
 ACAGCCACTGACAGGAGCACAGGTAAGGCTAACAAGATCACCATCACCAATGACAAGGGCCGCGTGGCA
 AGGAGGAGGTGGAGAGGATGGTTCATGAAGCCGAGCAGTACAAGGCTGAGGATGAGGCCAGAGGGACAG
 AGTGGCTGCCAAAACTCGCTGGAGGCCATGTCTTCATGTGAAAGTCTTTGCAAGAGGAAAGCCTT
 AGGGACAAGATCCCAGAGAGGACAGGCGCAAAATGCAAGACAAGTGTGCGGAAGTCTTGCTGGCTGG
 AGCACAACCAGCTGGCAGAGAAGGAGGATATGAGCATCAGAAGAGGGAGCTGGAGCAAATCTGTCGCC
 CATCTTCTCCAGGCTCTATGGGGGGCTGGTGTCCCTGGGGGCAGCAGTTGTGGCACTCAAGCCCGCCAG
 GGGGACCCAGCACCGGCCCATCATTGAGGAGTTGAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207795 protein sequence
Red=Cloning site Green=Tags(s)

MQAPRELAVGIDLGTTYSCVGVFQQGRVEILANDQGNRTTPSYVAFTDTERLVGDAAKSQAALNPHTVF
 DAKRLIGRKFADTTVQSDMKHWPFRVSEGGKPKVRVCYRGEDKTFYPEEISSMVL SKMKETA EAYLGQP
 VKHAVITVPAYFNDSQRQATKDAGAIAGLNLVRIINEPTAAAIAYGLDRRGAGERNVLI FDLGGGTFDVS
 VLSIDAGVFEVKATAGDTHLGGEDFDNRLVNHFMEEFRKHKGKDL SGNKRALRRLRTACERAKRTLSST
 QATLEIDSLFEGVDFYTSITRARFEELCSDLFRSTLEPVEKALRDAKLDKAQIHDVVLVGGSTRIPKVQK
 LLQDFFNGKELNKSINPDEAVAYGAAVQA AVLMDGKCEKVQDLLLLDVAPLSLGLTAGGVMTTLIQRNA
 TIPTKQTQFTTYSNQPGVFIQVYEGERAMTKDNNLLGRFELSGIPPAPRGVPQIEVTFDIDANGILSV
 TATDRSTGKANKITITNDKGRLSKEEVERMVHEAEQYKAEDAQRDRVAAKNSLEAHVFHVKGSLQEESL
 RDKIPEEDRRKMQDKCREVLAWLEHNQLAEKEEYEHQKRELEQICRPIFSRLYGGPGVPGGSSCGTQARQ
 GDPSTGPIIEEVD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6215_f05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002155

ORF Size: 1929 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 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_002155.3](#), [NP_002146.2](#)

RefSeq Size: 2664 bp

RefSeq ORF: 1932 bp

Locus ID: 3310

UniProt ID: [P17066](#)

Cytogenetics: 1q23.3

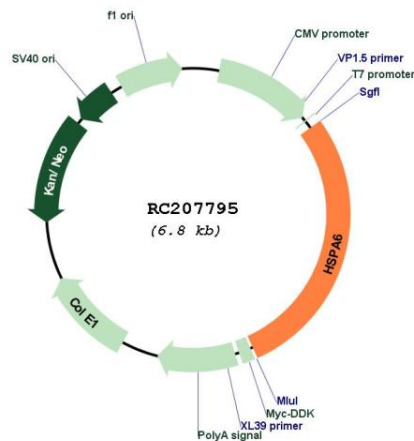
Domains: HSP70

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

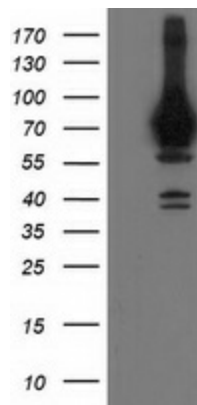
MW: 71 kDa

Gene Summary:

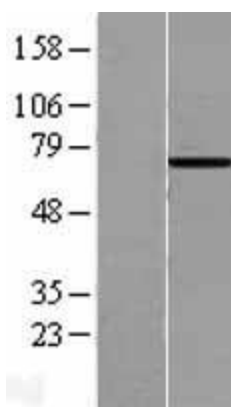
Molecular chaperone implicated in a wide variety of cellular processes, including protection of the proteome from stress, folding and transport of newly synthesized polypeptides, activation of proteolysis of misfolded proteins and the formation and dissociation of protein complexes. Plays a pivotal role in the protein quality control system, ensuring the correct folding of proteins, the re-folding of misfolded proteins and controlling the targeting of proteins for subsequent degradation. This is achieved through cycles of ATP binding, ATP hydrolysis and ADP release, mediated by co-chaperones. The affinity for polypeptides is regulated by its nucleotide bound state. In the ATP-bound form, it has a low affinity for substrate proteins. However, upon hydrolysis of the ATP to ADP, it undergoes a conformational change that increases its affinity for substrate proteins. It goes through repeated cycles of ATP hydrolysis and nucleotide exchange, which permits cycles of substrate binding and release (PubMed:26865365).[UniProtKB/Swiss-Prot Function]

Product images:


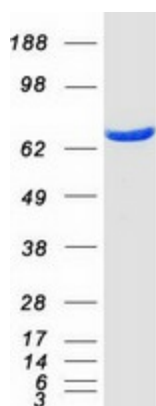
Circular map for RC207795



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HSPA6 (Cat# RC207795, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HSPA6 (Cat# [TA501950]). Positive lysates [LY419498] (100ug) and [LC419498] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419498]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207795 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HSPA6 protein (Cat# [TP307795]). The protein was produced from HEK293T cells transfected with HSPA6 cDNA clone (Cat# RC207795) using MegaTran 2.0 (Cat# [TT210002]).