

## Product datasheet for RC201800

### HSP27 (HSPB1) (NM\_001540) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** HSP27 (HSPB1) (NM\_001540) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** HSP27  
**Synonyms:** CMT2F; HEL-S-102; HMN2B; HS.76067; Hsp25; HSP27; HSP28; SRP27  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC201800 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACCGAGCGCCGCTCCCTTCTCGCTCCTGCGGGGCCAGCTGGGACCCCTCCGCGACTGGTACC  
CGCATAGCCGCTCTTCGACCAGGCTTCGGGTGCCCGGTGCCGAGGAGTGGTCGAGTGGTTAGG  
CGGCAGCAGCTGGCCAGGCTACGTGCGCCCTGCCCGCCATCGAGAGCCCGCAGTGGCCGCG  
CCCGCTACAGCCGCGCTCAGCCGGCAACTCAGCAGCGGGTCTCGGAGATCCGGCACACTGCGGACC  
GCTGGCGGTGTCCCTGGATGTCAACCACTTCGCCCCGACGAGCTGACGGTCAAGACCAAGGATGGCGT  
GGTGGAGATCACCGCAAGCAGGAGCGGCAGGACGAGCATGGCTACATCTCCCGGTGCTTCACGCGG  
AAATACACGCTGCCCCCGGTGTGGACCCACCAAGTTTCTCCTCCCTGTCCCTGAGGGCACACTGA  
CCGTGGAGGCCCATGCCAAGCTAGCCACGAGTCCAACGAGATCACCATCCCAGTCACTTCGAGTC  
GCGGGCCAGCTTGGGGCCAGAAGCTGCAAAATCCGATGAGACTGCCGCAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC201800 protein sequence  
 Red=Cloning site Green=Tags(s)

MTERRVPSLLRGPSPFRDWPYHSRLFQAFGLPRLPEEWSQWLGSSWPGYVRPLPPAAIESPAVAA  
PAYSRALSRQLSSGVSEIRHTADRWRVSLDVNHFAPDELTVKTKDGVVEITGKHEERQDEHGYSRCFTR  
KYTLPPGVDPTQVSSSLSPGTLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

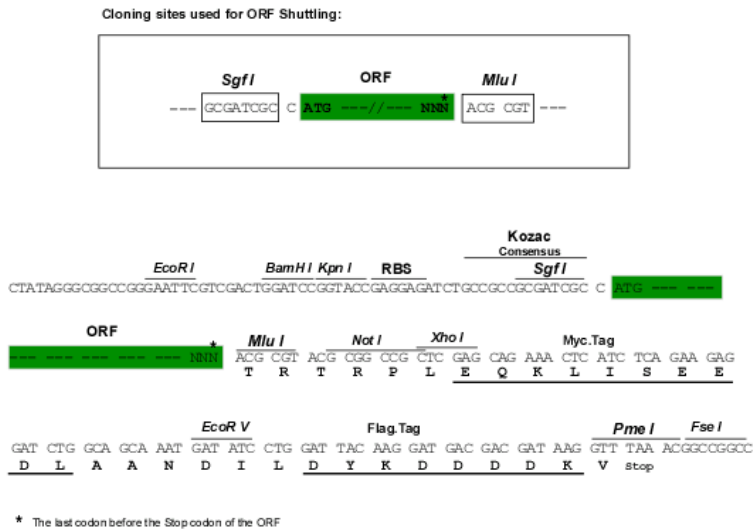


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Chromatograms: [https://cdn.origene.com/chromatograms/mk6084\\_a05.zip](https://cdn.origene.com/chromatograms/mk6084_a05.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_001540

ORF Size: 615 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.

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

**RefSeq:** [NM\\_001540.5](#)

**RefSeq Size:** 914 bp

**RefSeq ORF:** 618 bp

**Locus ID:** 3315

**UniProt ID:** [P04792](#)

**Cytogenetics:** 7q11.23

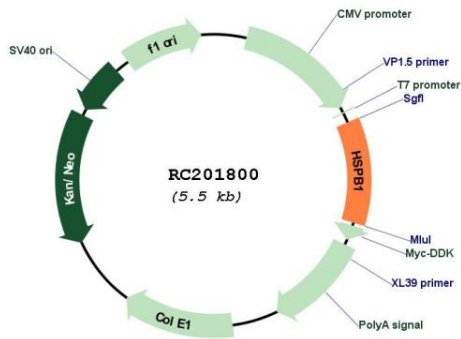
**Domains:** HSP20

**Protein Pathways:** MAPK signaling pathway, VEGF signaling pathway

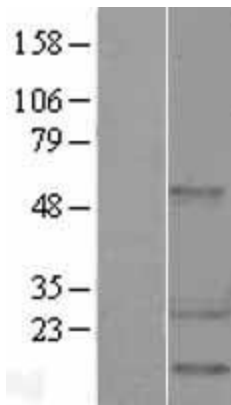
**MW:** 22.8 kDa

**Gene Summary:** This gene encodes a member of the small heat shock protein (HSP20) family of proteins. In response to environmental stress, the encoded protein translocates from the cytoplasm to the nucleus and functions as a molecular chaperone that promotes the correct folding of other proteins. This protein plays an important role in the differentiation of a wide variety of cell types. Expression of this gene is correlated with poor clinical outcome in multiple human cancers, and the encoded protein may promote cancer cell proliferation and metastasis, while protecting cancer cells from apoptosis. Mutations in this gene have been identified in human patients with Charcot-Marie-Tooth disease and distal hereditary motor neuropathy. [provided by RefSeq, Aug 2017]

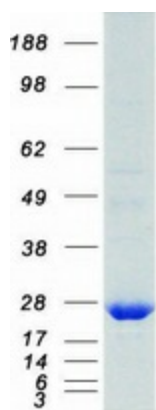
Product images:



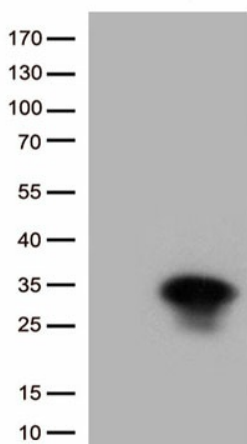
Circular map for RC201800



Western blot validation of overexpression lysate (Cat# [LY400587]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201800 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HSPB1 protein (Cat# [TP301800]). The protein was produced from HEK293T cells transfected with HSPB1 cDNA clone (Cat# RC201800) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HSPB1 (Cat# RC201800, 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-HSPB1 antibody (Cat# [TA813408])(1:1000)