

## Product datasheet for **RG201800**

### 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:** TurboGFP  
**Symbol:** HSP27  
**Synonyms:** CMT2F; HEL-S-102; HMN2B; HS.76067; Hsp25; HSP27; HSP28; SRP27  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG201800 representing NM\_001540  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGACCGAGCGCCGCTCCCTTCTCGCTCCTGCGGGGCCAGCTGGGACCCCTCCGCGACTGGTACC  
 CGCATAGCCGCTCTTCGACCAGGCTTCGGGTGCCCGGTGCCGGAGGAGTGGTCGAGTGGTTAGG  
 CGGCAGCAGCTGGCCAGGCTACGTGCGCCCTGCCCGCCATCGAGAGCCCGCAGTGGCCGCG  
 CCCGCTACAGCCGCGCTCAGCCGGCAACTCAGCAGCGGGTCTCGGAGATCCGGCACACTGCGGACC  
 GCTGGCGGTGTCCCTGGATGTCAACCACTTCGCCCGGACGAGCTGACGGTCAAGACCAAGGATGGCGT  
 GGTGGAGATCACCGCAAGCACGAGGAGCGGCAGGACGAGCATGGCTACATCTCCCGGTGCTTCACGCGG  
 AAATACACGCTGCCCCCGGTGTGGACCCACCAAGTTTCTCCTCCCTGTCCCCTGAGGGCACACTGA  
 CCGTGGAGGCCCATGCCCAAGCTAGCCACGAGTCCAACGAGATCACCATCCCAGTACCTTCGAGTC  
 GCGGGCCAGCTTGGGGGCCAGAAGCTGCAAAATCCGATGAGACTGCCGCAAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG201800 representing NM\_001540  
 Red=Cloning site Green=Tags(s)

MTERRVPSLLRGP SWDPFRDWYPHSRLFDQAFGLPRLPEEWSQWLGGSSWPGYVRPLPPAAIESPAVAA  
 PAYSRLSRQLSSGVSEIRHTADRWRVSLDVNHFAPDELTVKTKDGVVEITGKHEERQDEHGYSRCFTR  
 KYTLPPGVDPTQVSSLSPEGLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-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.

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

RefSeq Size: 865 bp

RefSeq ORF: 618 bp

Locus ID: 3315

UniProt ID: [P04792](#)

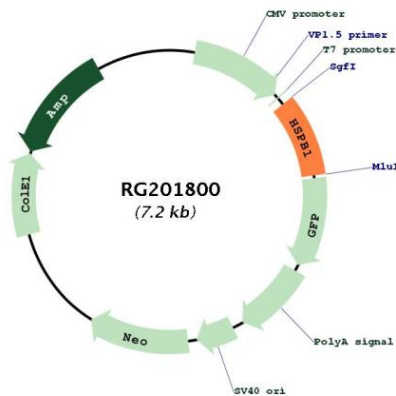
Cytogenetics: 7q11.23

Domains: HSP20

Protein Pathways: MAPK signaling pathway, VEGF signaling pathway

**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 RG201800