

## Product datasheet for **MG224575**

### **Sdhaf1 (NM\_001033140) Mouse Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Sdhaf1 (NM\_001033140) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Sdhaf1  
**Synonyms:** 0610010E21Rik; AI430885; AW490662; Lymr8  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG224575 representing NM\_001033140  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGCCGGCCAGCCGGTTGCAGAGGCAAGTTCTGAGCCTGTACCGCGAGCTGCTGCGCGCCGGGCGCG  
 GGACGCCGGGCGCCGAGGCGCGGGTGGGGCCGAGTCCGGCAGCACGCCAGCCTCCGCGAACCAGCT  
 GCTGCGTATCGAGTATCTGTATCGCCGGGGTGGCGCCAGCTACAGCTGCTGCGTTCGGGCCACGCCAGC  
 GCCATGGGTACCTTCGTGCGCCCGGGGTCCGGCTGAAGAGCCCGCGACGCGACGCCCGGGGACCA  
 GGCTGGATGATGGTGGTCCCAAGAATCTTGTGAAGATACAGGGCGCGGGAGACCGATCCGATGG  
 ACGG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG224575 representing NM\_001033140  
 Red=Cloning site Green=Tags(s)  
 MSRPSRLQRQVLSLYRELLRAGRTPGAEARVRAEFRQHASLPRTDVLRIEYLYRRGRRQLQLLRSGHAT  
 AMGTFVVRPRGPAEEPGDATAPGTRLDGAPKNSCEDTGARETRSDGR

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



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Cloning Scheme:



ACCN: NM\_001033140

ORF Size: 354 bp

OTI Disclaimer: 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\\_001033140.3](#), [NP\\_001028312.2](#)

RefSeq Size: 987 bp

RefSeq ORF: 357 bp

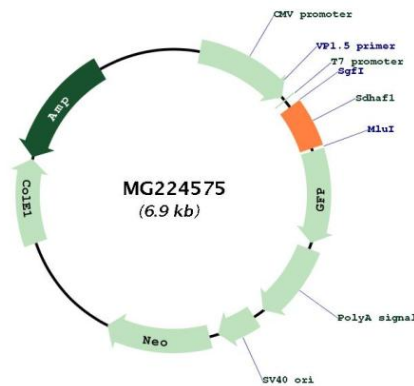
Locus ID: 68332

UniProt ID: [Q3U276](#)

Cytogenetics: 7 B1

**Gene Summary:** Plays an essential role in the assembly of succinate dehydrogenase (SDH), an enzyme complex (also referred to as respiratory complex II) that is a component of both the tricarboxylic acid (TCA) cycle and the mitochondrial electron transport chain, and which couples the oxidation of succinate to fumarate with the reduction of ubiquinone (coenzyme Q) to ubiquinol. Promotes maturation of the iron-sulfur protein subunit Sdhb of the SDH catalytic dimer, protecting it from the deleterious effects of oxidants. May act together with SDHAF3. Contributes to iron-sulfur cluster incorporation into SDHB by binding to SDHB and recruiting the iron-sulfur transfer complex formed by HSC20, HSPA9 and ISCU through direct binding to HSC20.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG224575