

## Product datasheet for **MR218102**

### Hadhb (NM\_145558) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hadhb (NM_145558) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hadhb
Synonyms:	4930479F15Rik; Mtpb; TP-beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR218102 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACTACCATCTTGACTTCCACTTTTAGAACTTGCAACTACATCAAATGGGCTCTCAGATCTTCTA  
 TAAGACCTCTGAGCTGTTCTTCCAACTGCACTCTGCCAGCTGTCCAGACCAAGTCAAAGAAGACTTT  
 AGCAAAACCCAATATGAAGAATATTGTGGTGGTGAAGGGTCCGCATTCATTTCTGCTGTCAGGCACT  
 TCGTATAAAGACCTAATGCCACATGACTTGGCTAGAGCTGCATTTCCGGTTTGTTCATCGGACCAATA  
 TTCCAAAGGATGTTGTTGATTATATCATCTTGGTACAGTTATTCAGGAAGTAAAAACAAGCAATGTGGC  
 TAGAGAGGCTGCCCTGGGAGCTGGCTTCTCTGATAAGACTCCAGCTCACACTGTCACCATGGCTTGATC  
 TCTTCAAACCAAGCCATGACCACAGCTGTTGGTCTGATAGCTTCCGCCAGTGTGATGTCGTCGTTGGCTG  
 GTGGTGTGAGTTAATGTCTGATGTCCCTATTCGTCATTCAAGAAATATGAGGAAATGATGCTTGATCT  
 CAATAAGCCAAGACTCTGGGCCAGCGCTGCTTACTCAGTAAATTCAGATTGAATTTCTGTCCCCT  
 GAGCTCCCTGCAGTGGCTGAGTTCTCCACTAATGAGACCATGGGCCACTCTGCAGACCGACTGGCTGCTG  
 CCTTGTCTGTTTCTGAATGGAACAGGATGAATATGCACTGCGTTCTCATAGTCTGGCCAAGAAGGCACA  
 GGATGAAGGACACCTTTCTGATATTGTACCCTTCAAAGTACCAGGAAAGGACACAGTTACCAAAGATAAT  
 GGGATCCGTCCTTCTCACTGGAGCAAATGGCCAACTAAAACCTGCGTTCATCAAACCTATGGCACAG  
 TGACAGCTGCAAATCTTCTTCTGACTGATGGCGCTTCTGCGATGCTAATCATGTGTCAGAGGACAGAGC  
 TCTGGCCATGGTTATAAACCAAAGGCATATTTGAGGGATTTATATATGTGTCCAGGATCCGAAAGAT  
 CAGCTTTTACTCGGACCAACATATGCTACTCCAAAAGTTTGTAGAAAAGGCAGGGTTAACCATGAATGATA  
 TCGATGCTTTTGAATTTTCAATGAAGCCTTCTCAGGCCAGATTTTAGCTAACTTTAAAGCCATGGATTCTGA  
 TTGGTTTGCACAAAACACTACATGGGTAGGAAAACCAAGTTGGATCACCTCCTCTGGAGAAGTTTAATATC  
 TGGGGCGGATCACTGTCTCTGGGCACCCTTTTGGAGCCACTGGCTGTCGGCTGGTCATGGCAGCTGCCA  
 ACAGACTGAGGAAGGATGGAGGCCAGTATGCTTTAGTGGCTGCCTGTGCAGCTGGAGGACAGGGTCATGC  
 TATGATTGTGGAAGCTTACCCAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR218102 protein sequence  
 Red=Cloning site Green=Tags(s)

MTTILSTFRNLSTTSKVALRSSIRPLSCSSQLHSAPAVQTKSKTLAKPNMKNI VVVEGVRIPFLSGT  
 SYKDLMPHDLARAALSGLLHRTNIPKDVVDYIIFGTVIQEVKTSNVAREAAALGAGFSDKTPAHTVTMACI  
 SSNQAMTTAVGLIASGQCDVVVAGGVVMSDVP IRHSRNM RKMMLDLNKAKTLGQRLSLLSKFRLNFLSP  
 ELPVAEAFSTNETMGHSADRLAAAFVSRMEQDEYALRSHSLAKKAQDEGHLSDI VPFKVPKDTVTKDN  
 GIRPSSLEQMAKLPKPAFIKPYGTVTAANSSFLTDGASAMLI MSEDRALAMGYKPKAYLRDFIYVSQDPKD  
 QLLLGPYATPKVLEKAGLTMNDIDAFEFHEAFSGQILANFKAMDSDF AQNYMGRKTKVGSPPLEKFN I  
 WGGSLSLGHPFGATGCR LVMAAANRLRKDGQYALVAACAAGGQGHAMIVEAYPK

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_145558

**ORF Size:** 1428 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\\_145558.2](#), [NP\\_663533.1](#)
**RefSeq Size:** 2045 bp

**RefSeq ORF:** 1428 bp

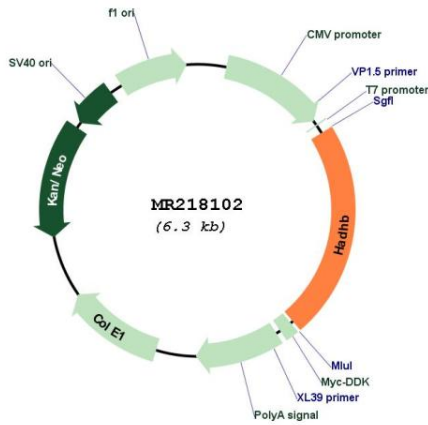
**Locus ID:** 231086

**UniProt ID:** [Q99JY0](#)

**Cytogenetics:** 5 B1  
**MW:** 51.4 kDa

**Gene Summary:** Mitochondrial trifunctional enzyme catalyzes the last three of the four reactions of the mitochondrial beta-oxidation pathway. The mitochondrial beta-oxidation pathway is the major energy-producing process in tissues and is performed through four consecutive reactions breaking down fatty acids into acetyl-CoA. Among the enzymes involved in this pathway, the trifunctional enzyme exhibits specificity for long-chain fatty acids. Mitochondrial trifunctional enzyme is a heterotetrameric complex composed of two proteins, the trifunctional enzyme subunit alpha/HADHA carries the 2,3-enoyl-CoA hydratase and the 3-hydroxyacyl-CoA dehydrogenase activities, while the trifunctional enzyme subunit beta/HADHB described here bears the 3-ketoacyl-CoA thiolase activity.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR218102