

Product datasheet for **MR220454**

Tbc1d7 (NM_025935) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Tbc1d7 (NM_025935) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Tbc1d7
Synonyms: 2610009C09Rik
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR220454 representing NM_025935
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGACTGACGACTCTCAGAGGAACCTTCGATCAGTCTACTATGAGAAAGTCGGGTTTCGTGGTGTGCAAG
AAAAGAAATCACTGAAATCCTCCTGAAAGATGACCGTTTGGACATCGAGAAGCTTGCACATTTAGCCA
GAGGTTCCCTCTCCCATCCATGTATCGCGGTTGGTATGGAAGGCGCTTCTAGGCATCTTACCTCCGCAC
CATGACACTCATTCCCAGGTGATGGCCTACCGCAAAGACCAGTACCATGACATCCTCCATGCCCTGACAG
TCGTCCGCTTCATCAGTGTGCCACGCCACAGGCTGAAGTGTATCTTCGCATGTATCAGCTTGAATCGGG
GAAGCTACCTCGAAGTCCCTCTTTTCTCTGGAGCCGGAGGATGAAGTCTTCTTGCCATCGCCAAGGCC
ATGGAAGAGATGGTGAAGACAGTGTGGACTGTTACTGGATCAGCCGATGCTTCGTGAAGCAGTTAATA
ACAAGTACAGGGACGCTTTACCTCAGCTGCCAAAGGCTTTCGAGCAGTACTTGAATCTGGAAGACAGTAG
GCTGCTGAGTCACCTGAAGACGTGTTCTGCAGTGTCCAACTGCCTTACGACCTCTGGTTCCAAAGGTGC
TTCGCGGGATGCCTCCCCGAGTCCAGTTTACAGAGGGTCTGGGATAAAGTCGTAAGTGGATCCTGTAAAGA
TCCTAGTTTTGTAGCGGTAGAAATACTATTAACCTTTAAAATAAAGTGCATGGCATTGAACAGTGCAGA
GAAGATAACGAAGTTCCTGGAAAATATTCCTCAGGACAGCTCAGATGCCATCGTGAGCAAGGCCATCGAC
TTGTGGCACAACACTGTGGACCCAGTGCATTTCGGCC

**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA**



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Protein Sequence: >MR220454 representing NM_025935
Red=Cloning site Green=Tags(s)

MTDDSQRNFRSVYYEKVGFGRGVEEKKSLIILLKDDRLDIEKLCTFSQRFPLPSMYRALVWKALLGILPPH
 HDTHSQVMAYRKDQYHDILHALTVVRFISDATPQAEVYLRMYQLESGKLPRSPSPLEPEDEVFLAIKA
 MEEMVEDSVDCYWISRCFVKQLNNKYRDALPQLPKAFEQYLNLEDSRLLSHLKTCSAVSKLPYDLWFQRC
 FAGCLPESSLQRVWDKVVSGSCKILVFVAVEILLTFKIKVMALNSAEKITKFLENIPQDSSDAIVSKAID
 LWHKHCCTPVHSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9059_f06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_025935

ORF Size: 879 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_025935.3](#), [NP_080211.1](#)

RefSeq Size: 1248 bp

RefSeq ORF: 882 bp

Locus ID: 67046

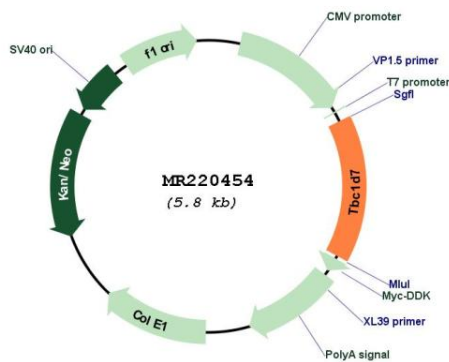
UniProt ID: [Q9D0K0](#)

Cytogenetics: 13 A4

MW: 33.8 kDa

Gene Summary: Component of the TSC-TBC complex, that contains TBC1D7 in addition to the TSC1-TSC2 complex and consists of the functional complex possessing GTPase-activating protein (GAP) activity toward RHEB in response to alterations in specific cellular growth conditions. The small GTPase RHEB is a direct activator of the protein kinase activity of mTORC1 and the TSC-TBC complex acts as a negative regulator of mTORC1 signaling cascade by acting as a GAP for RHEB. Participates in the proper sensing of growth factors and glucose, but not amino acids, by mTORC1. It is unclear whether TBC1D7 acts as a GTPase-activating protein and additional studies are required to answer this question.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR220454