

## Product datasheet for **MR229059**

### **Tbc1d7 (NM\_001252639) Mouse Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Tbc1d7 (NM\_001252639) 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:** >MR229059 representing NM\_001252639  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGACTGACGACTCTCAGAGGAACCTTCGATCAGTCTACTATGAGAAAGTCGGGTTTCGTGGTGTGCAAG  
AAAAGAAATCACTGAAATCCTCCTGAAAGATGACCGTTTGGACATCGAGAAGCTTGCACATTTAGCCA  
GAGGTTCCCTCTCCCATCCATGTATCGCGCTTGGTATGGAAGGCGCTTCTAGGCATCTTACCTCCGCAC  
CATGACACTCATTCCCAGGTGATGGCCTACCGCAAAGACCAGTACCATGACATCCTCCATGCCCTGACAG  
TCGTCCGCTTCATCAGTGTGCCACGCCACAGGCTGAAGTGTATCTTCGCATGTATCAGCTTGAATCGGG  
GAAGCTACCTCGAAGTCCCTCTTTTCTCTGGAGCCGGAGGATGAAGTCTTCTTGCCATCGCCAAGGCC  
ATGGAAGAGATGGTGAAGACAGTGTGGACTGTTACTGGATCAGCCGATGCTTCGTGAAGCAGTTAATA  
ACAAGTACAGGGACGCTTTACCTCAGCTGCCCAAGGCTTTCGAGCAGTACTTGAATCTGGAAGACAGTAG  
GCTGCTGAGTCACCTGAAGACGTGTTCTGCAGTGTCCAACTGCCTTACGACCTCTGGTTCCAAAGGTGC  
TTCGCGGGATGCCTCCCGAGTCCAGTTTACAGAGGGTCTGGGATAAAGTCGTAAGTGGATCCTGTAAAGA  
TCCTAGTTTTTGTAGCGGTAGAAATACTATTAACCTTTAAATAAAGTGCATGGCATTGAACAGTGCAGA  
GAAGATAACGAAGTTCCTGGAAAATATTCCTCAGGACAGCTCAGATGCCATCGTGAGCAAGGCCATCGAC  
TTGTGGCACAACACTGTGGGACCCAGTGCATTTCGGCC

**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA**



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**Protein Sequence:** >MR229059 representing NM\_001252639  
Red=Cloning site Green=Tags(s)

MTDDSQRNFRSVYYEKVGFGRGVEEKKSLIILLKDDRLDIEKLCTFSQRFPLPSMYRALVWKALLGILPPH  
 HDTHSQVMAYRKDQYHDILHALTVVRFISDATPQAEVYLRMYQLESGKLPRSPSFLEPEDEVFLAIKA  
 MEEMVEDSVDCYWISRCFVKQLNKNYRDALPQLPKAFEQYLNLEDSRLLSHLKTCSAVSKLPYDLWFQRC  
 FAGCLPESSLQRVWDKVVSGSCKILVFVAVEILLTFKIKVMALNSAEKITKFLENIPQDSSDAIVSKAID  
 LWHKHCCTPVHSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_001252639

**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\\_001252639.1](#), [NP\\_001239568.1](#)

**RefSeq Size:** 1268 bp

**RefSeq ORF:** 882 bp

**Locus ID:** 67046

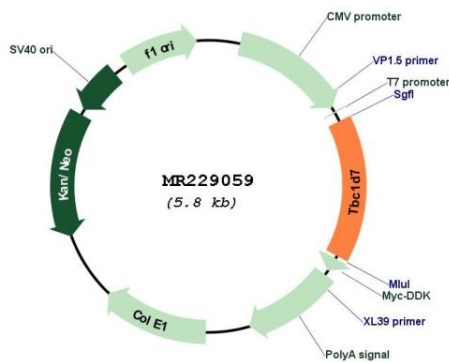
**UniProt ID:** [Q9D0K0](#)

**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 MR229059