

## Product datasheet for MR224982

### Trpm7 (NM\_021450) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Trpm7 (NM_021450) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Trpm7
Synonyms:	2310022G15Rik; 4833414K03Rik; 5033407O22Rik; CHAK; CHAK1; Ltrp7; LTrpC-7; Ltrpc7
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR224982 representing NM_021450 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGTCCCAGAAATCCTGGATAGAGAGCACTTTGACCAAGAGGGAGTGTGTATATATTATACCAAGCTCCA  
AAGACCCTCACAGATGTCTCCAGGATGTCAGATTTGTCAGCAACTTGTGAGATGTTCTGTGGTCTGTT  
GGTCAAGCAACATGCATGCTTTACTGCAAGTCTTGCCATGAAATACTCAGATGTGAAATGGGTGAACAC  
TTTAACCAAGCAATAGAAGAATGGTCTGTGGAAAAGCACACGGAGCAGAGCCCAACAGATGCTTATGGAG  
TCATCAATTTTCAAGGGGTTCTCATTCTACAGAGCTAAGTATGTGAGACTATCATATGATACCAAAACC  
TGAAATCATTCTGCAACTTCTGCTTAAAGAATGGCAAAATGGAGTTACCCAAACTGTTATTTCTGTACAT  
GGAGGCATGCAGAAGTTTGAACCTCATCCAAGAATCAAGCAGTTGCTTGGAAAAGGTCTTATTAAGCTG  
CAGTTACAACCGGAGCTTGGATTTAACTGGAGGAGTCAATACAGGTGTGGCAAAACATGTTGGTGATGC  
CCTCAAAGAACATGCTTCCAGATCATCTCGAAAAATTTGCACTATTGGAATAGCTCCATGGGGAGTGATA  
GAAAACAGAAATGATCTTGTGGGAGAGATGTGGTTGCTCCTTATCAAACCTATTGAATCCCTTGAGCA  
AATTGAATGTTCTGAATAATCTACACTCCCATTTTCATCTTGGTGGATGATGGCACTGTTGGAAAGTATGG  
GGCAGAAGTCAGACTGAGAAGAGAACTTGA AAAAACCATTAATCAGCAAAGAATTCATGCTAGAATTGGG  
CAAGGAGTTCTGTGGTGGCTTTGATATTTGAAGGCGGGCCAAATGTCATCCTTACAGTACTGGAGTACC  
TTCAGGAAAGCCCCCAGTTCCAGTTGTTGTGTGTAAGGGACAGGCAGAGCTGCAGATTTACTAGCCTA  
TATCCACAACAGACAGAGGAAGGAGGAAATCTTCCTGATGCAGCAGAGCCTGATATTATCAACTATC  
AAGAAAACATTTAACTTTGGCCAGAGTGAAGCAGTTTCAATTTTCAAACAATGATGGAGTGTATGAAAA  
AAAAAGAGCTTACTACTGTTTTTACATTTGGATCAGAGGATCATCAAGATATAGATGTGGCCATACTCAC  
TGCACTGCTGAAAGTACTAATGCATCTGCATTTGACCAGCTTATCCTTACACTGGCATGGGACAGAGTT  
GATATTGCCAAAAATCATGTATTTGTTTATGGACAACAGTGGCTGTTGGATCCTTGGAACAGGCTATGC  
TTGATGCTCTTGTAAATGGACAGAGTTTCATTTGTAAAACCTTCTATTGAAAACGGAGTAAGCATGCATAA  
ATTCCTTACCATTCCCAGACTGGAAGAAGCTTTATAAACAATAAAGGTCCAACCAATCCAATGTTGTTCC  
CATCTCATTCCGGGATGTCAAGCAGGGTAATCTCCCCCGGGGTACAAGATCACTTAAATTGATATAGGAC



[View online »](#)

TTGTGATTGAGTATCTCATGGGAGGAACCTACAGATGCACATACACACGAAAACGTTTTTCGATTGATATA  
 TAATAGTCTTGGTGGAAATAACCGGAGGTCAAGTGCAGAAATACCTCCAGCAGCACCCCTCAGTTGCGAAAAG  
 AGTCATGAAACTTTTGGCAATAGAGCTGATAAAAAGGAAAAATGAGACACAATCATTTCATTAACACAG  
 CCCAACCTACAGACCAAGATGGATGCATCTATGGAAGAAGGAAAAGAAGAAAAGAACCAAGATGAAAT  
 TGTAGATATAGATGATCCAGAGACCAAGCGCTTTCCTTATCCTCTTAATGAATTATTAATTTGGGCTTGC  
 CTTATGAAGAGGCAGGTGATGGCCCGCTTTTTATGGCAGCATGGTGAAGAATCAATGGCTAAAGCATTAG  
 TTGCCTGTAAAACTCTATCGTTCAATGGCTTATGAGGCAAAGCAGAGTGACCTGGTAGATGATACTTCAGA  
 GGAATGAAGCAGTATTCCAATGATTTTGGCCAAGTGGCAGTTGAATTACTGGAACAGTCCCTTCAGACAG  
 GATGAAACGATGGCTATGAAATTAATCACTTATGAACTCAAAAACCTGGAGTAATTAACCTGCCTCAAGT  
 TAGCAGTTTCTCAAGACTTAGACCTTTTGTAGCTCACACTTGTACACAGATGTTGTTATCTGATATGTG  
 GATGGGACGGCTGAATATGAGAAAAATTCCTGGTATAAGGTCATATTAAGCATTATAGTTCCACCTGCC  
 ATATTAATGCTAGAGTATAAAACCAAGGCTGAAATGTCCCATATCCACAATCTCAAGATGCTCATCAA  
 TGACGATGGAGGATAGTGAACAATTTTCAACATAACAGAAGAGATACCCATGGAAGTATTTAAAGA  
 AGTAAAGATTTTGGACAGCAGTGTGAAAGAATGAAATGGAGATACATATTAATCAAAAAGCTTCCA  
 ATCACACGAAAAATTTATGCCTTTTATCATGCACCAATTGTAAGTTCTGGTTTAAACACATTGGCATT  
 TAGGATTTCTGATGCTTTATACATTTGTAGTCTTGTAAAAATGGAACAGTTACCTTCAGTTCAAGAATG  
 GATTGTTATCGCTTATATTTTTACCTATGCTATTGAAAAAGTCCGTGAGGCTTTCATGTCTGAAGCTGGG  
 AAAATCAGCCAGAAGATTAAGTATGGTTAGTGACTACTTCAATGTCAGTGACACAATTGCCATCATT  
 CTTTCTTTGTTGGATTTGGACTAAGATTTGGAGCAAAAATGGAAGTATATTAATGCATATGATAATCATGT  
 TTTTGTGGCTGGAAGATTAATTTACTGTCTTAATAATAATTTTGGTATGTGCGTTTGTAGACTTTCTA  
 GCCGTAATCAACAGGCAGGACCTTATGTAATGATGATTGAAAAATGGTGGCCAATATGTTCTACATTG  
 TAGTGATAATGGCTCTTGTATTGCTTAGTTTTGGTGTCCAGAAAAGCAATACTTTATCCACATGAAGA  
 ACCACTTTGGTCTTTGCTAAAGATATAGTTTTTCACTCCATACTGGATGATTTTTGGTGAAGTTTATGCA  
 TATGAAATTTGATGTGTGTGCAAATGACTCCACTCTCCGACAATCTGTGGTCTGGAACCTGGTTGACTC  
 CATTCTTCAAGCAGTCTACCTCTTGTACAGTATATCATTATGGTTAATCTCCTTATCGCATTTTTCAA  
 TAATGTATATTTACAAGTGAAGGCAATTTCCAATATTGTATGGAAGTATCAGCGGTATCATTATTTATG  
 GCTTATCATGAAAAACAGTCTGCCTCCTCCTTATCATCCTCAGCCATATAGTTTCACTGTTTTGCT  
 GTGATGCAAAAAGAAGAAAAGATAAGACTTCCGATGGGCCAAAACCTTTTCTAACAGAAGAAGATCA  
 AAAGAACTCCATGATTTGAAGAGCAGTGTGTTGAGATGACTTTGATGAGAAAGATGACAAATCAAT  
 TCTGGGAGTGAAGAGAGAATCCGGGTCACTTTTGAAGAGTGGAGCAGATGAGCATTAGATTAAAGAAG  
 TTGGAGATCGTGTCAACTACATAAAAAGATCATTACAGTCTTTAGATTCTCAAATGGTCATCTGCAAGA  
 TCTCTCAGCCCTAACAGTAGATACATTGAAAACACTTACAGCCAGAAAGCTTCAGAAGCTAGTAAAGTG  
 CACAATGAGATCACACGAGAATTGAGTATTTCAAACACTTGGCTCAGAATCTTATTGATGATGTTCTCTG  
 TAAGACCTTTGTGGAAGAAACCTAGTGCTGTAACACACTGAGTTCCTCTCTTCAAGGTGATCGGGA  
 AAGTAATAATCCTTTTCTTTGTAATATTTTTATGAAAGATGAAAAAGACCCCAATATAATCTGTTTGG  
 CAAGATTTGCCGTGATACCCAGAGAAAAGAAATCAACATTCAGAGGCTGGTTCCTCCTGTGGTGCT  
 TATTCCTCAAGTGTCTTCTCCCCAGAATTACGACAGAGACGACATGGGGTAGAAATGTTAAAAATATT  
 TAATAAAAATCAAAAATAGGCAGTTCACCTAATAGTTACCACATATGCTCTCCCAACCAACCAATTT  
 TCTGTGAGTACCCATCCCAGCCAAGTTGCAAAAGTCACTTGAATCCACAACCAAGATCAAGAACCCA  
 TTTTCTATAAAGCTGCAGAAGGGGATAACATAGAATTTGGAGCATTTGTGGGACACAGAGATAGTATGGA  
 CTTACAGAGGTTTAAAGAAACATCAAACAAAATAGAGAACTGTTATCTAATGATACTCCTGAAAACACT  
 CTGAAACATGTGGGTGCTGCTGGATATAGTGAATGTTGTAAGACTTCTACTTCTCTTCACTCGGTGCAAG  
 CAGAAAGCTGTAGTAGAAGAGCGTCGACGGAAGACTCTCCAGAAGTCGATTCTAAAGCAGCTTTGTTACC  
 GGATTGGTTACGAGATAGACCATCAAACAGAGAAATGCCATCTGAAGGAGGAACATTAATGGTCTTGT  
 TCTCCATTTAAGCCGTTTTGGATACAAATTAATTTTATTCAGCTGTGAAAGAAAATAACCTGATGAGGT  
 TGTACAGAGTATTCCTTCGTTCTGTACCTCCAGGCGGAGCCTGTACAGTGTACCGTCTGGAGGA  
 GAGTTCTCCAGTATACTGAATAACAGCATGTCTTCATGGTCTCAGCTAGGCCTCTGTGCCAAAATTGAG  
 TTTTAAAGTAAAGAGGAAATGGGAGGTGGTTTACGAAGAGCAGTCAAAGTGTGTACCTGGTCAGAGC  
 ACGATATCCTGAAGTCAAGGCATCTCTATATCATTAAAGTCATTTCTTCTGAGGTGATAAACACATGGTC  
 AAGCATTTATAAAGAAGTACGGTTCTACATCTGTCTCAGAGAAAATACAACAACAGAGAGCAGACAA  
 AAGCTCACATTTGCCTTTAATCAGATGAAACCAATCCATACCATATTCTCAAGGTTCTTTGAAGTTT  
 TCCTGTTGACTGCCATTCAGCAGGGCAGTGGTTTGTGTAGAAGAGTGCATGACTGGTGAATTTAGAAA

ATACAACAACAATAATGGTGATGAAATCATTCTCAAACTACTCTAGAAGAGATCATGCTAGCCTTTAGC  
 CACTGGACCTATGAATATACCAGAGGGGAGTTACTGGTACTTGACTTACAAGGAGTGGGAGAAAACCTTGA  
 CTGACCCATCTGTAAATAAAAGCTGAAGAAAAAAGATCCTGTGACATGGTTTTGGCCCTGCCAATCTAGG  
 AGAAGATGCAATAAAAACTTCAGAGCCAAACATCACTGTAATCTTGTGTGCGAAAGCTTAAACTTCCA  
 GATTTGAAGAGGAATGACTACACGCCTGATAAAATTATATTTCTCAGGATGAGTCATCAGATTTGAATC  
 TTCAATCTGAAAATTCCACCAAAGAATCAGAAGCAACAAATTCTGTTCTGCTGATGTTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR224982 representing NM\_021450  
 Red=Cloning site Green=Tags(s)

MSQKSWIESTLTKRECVYIIPSSKDPHRCLPGCQICQQLVRCFCGRLVKQHACFTASLAMKYSVDKLG  
 FNQAIIEEWSVEKHTEQSPDAYGVINFGGSHSYRAKYVRLSYDTKPEIILQLLLKEWQMEPLKLVISVH  
 GGMQKFELHPRIKQLLGKGLIKAAVTTGAWILTGGVNTGVAKHVGDALKEHASRSRRICTIGIAPWGI  
 ENRNDLVGRDVPVAPYQTLNPLSKLNLVNLHSHFILVDDGTGKYGAEVRLRRELEKTINQRIHARIG  
 QGVPVVALIFEGGPNVILTVLEYLQESPPVPPVCEGTGRAADLLAYIHKQTEEGNLPDAAEPDIISTI  
 KKTFFNGQSEAVHLFQTMMECMKKKELITVFHIGSEHDQIDVAILTALLKGTNASAFDQLILTLAWDRV  
 DIAKNHVFVYQQWLVGSLEQAMLDALVMDRVSFVKLLIENGVSMMHKFLTIPRLEELYNKQGPNTPLF  
 HLIRDVKQGNLPPGYKITLIDIGLVIEYLMGGTYRCTYTRKFRILYNSLGGNNRRSGRNTSSSTPQLRK  
 SHETFGNRADKKEKMRHNFIKTAQPYRPMKMDASMEEGKKRKTDEIVDIDDPETKRFYPLNELLIWAC  
 LMKRQVMARFLWQHGEESMAKALVACKIYRSMAYEAKQSDLVDDTSEELKQYSNDFGQLAVELLEQSFRQ  
 DETMAMKLLTYELKNWSNSTCLKLA VSSRLPFFAHTCTQMLLSDMWMGRLNMRKNSWYKVIILSILVPPA  
 ILMLEYKTKAEMSHIPQSQDAHQMTMEDSENNFHNIITEEIPMEVFKEVKILDSSDGKNEMEIHKSKKLP  
 ITRKFYAFYHAPIVKFWFNTLAYLGFMLYTFVVLVKMEQLPSVQEWIVIAYIFTYAIIEKVREVMSEAG  
 KISQKIKVWFSDYFNVSDTIAIISFFVGFGLRFGAKWNYINAYDNHVFVAGRLIYCLNIIFFWYVRLD  
 AVNQAGPYVMMIGKVMANMFYIIVVIMALVLLSFGVPRKAILYPHEEPSWSLAKDIVFHPYWMIFGEVYA  
 YEIDVCANDSTLPTICPGPTWLTPLQAVYLVFQYIIMVNLIIAFFNNVYLQVKAISNIVWKYQRYHFIM  
 AYHEKPVLPPLIILSHIVSLFCCVCKRRKKDKTSDGPKLFLTEEDQKKLHDFEEQCVEMYFDEKDDKFN  
 SGSEERIRVTFERVEQMSIQIKEVGDVNYIKRSLQSLDSQIGHLQDLSALTVDTLKTTLTAQKASEASKV  
 HNEITRELSISKHLAQNLIDDVVRPLWKKPSAVNTLSSSLPQGDRESNPNFLCNIFMKDEKDPQYNLFG  
 QDLPVIPQRKEFIPEAGSSCGALFPSAVSPELRRRRHGVEMLKIFNKNQKLGSSPNSPHMSSPPTKF  
 SVSTPSQPSCSKHLESTTKDQEPIFYKAAEGDNIEFGAFVGHRSMDLQRFKETSNIKIRELLSNDTPENT  
 LKHVGAAGYSECCKTSTLSHSVQAESCSRRASTEDSPEVDSKAALLPDWLRDRPSNREMPSEGGTLNGLA  
 SPFKPVLDTNYYSAVERNLMRLSQSIPFVPPRGPVTVYRLEESSPSILNNSMSSWSQLGLCAKIE  
 FLSKEEMGGRLRAVKVLCTWSEHDILKSGHLYIKSFLPEVINTWSSIYKEDTVLHCLREIQQRRAAQ  
 KLTFAFNQMKPKSIPYSPRFLEVFLLYCHSAGQWFAVEECMTGEFRKYNNNGDEIPTNTLEEIMLAFS  
 HWTYEYTRGELLVLDLQGVGENLTDPSVIKAEERKSCDMVFGPANLGEDA IKNFRAKHHCNCCRKLKLP  
 DLKRNDYTPDKIIFPQDESSDLNLQSGNSTKESEATNSVRLML

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

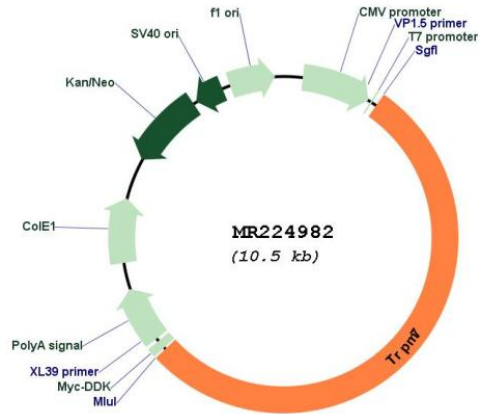
**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_021450

ORF Size: 5589 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_021450.2</a> , <a href="#">NP_067425.2</a>
<b>RefSeq Size:</b>	7145 bp
<b>RefSeq ORF:</b>	5592 bp
<b>Locus ID:</b>	58800
<b>UniProt ID:</b>	<a href="#">Q923J1</a>
<b>Cytogenetics:</b>	2 F1
<b>MW:</b>	212.8 kDa
<b>Gene Summary:</b>	Essential ion channel and serine/threonine-protein kinase. Divalent cation channel permeable to calcium and magnesium. Has a central role in magnesium ion homeostasis and in the regulation of anoxic neuronal cell death. Involved in TNF-induced necroptosis downstream of MLKL by mediating calcium influx. The kinase activity is essential for the channel function. May be involved in a fundamental process that adjusts plasma membrane divalent cation fluxes according to the metabolic state of the cell. Phosphorylates annexin A1 (ANXA1). [UniProtKB/Swiss-Prot Function]