OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MC224620

Trpm2 (NM_138301) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Trpm2 (NM_138301) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Trpm2
Synonyms:	9830168K16Rik; C79133; LTRPC2; Trp7; TRPC7; Trrp7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC224620 representing NM_138301 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGTCCTTGGACCGGAGAAGAACTGGCTCTGAGCAGGAGGAGGGCTTTGGGGTGCAGTCAAGGAGGG
CCACTGACCTGGGCATGGTCCCCAATCTCCGACGAAGCAATAGCAGCCTTTGCAAGAGCAGGAGATTTCT
GTGCTCTTTCAGCAGTGAGAAGCAAGAAAACCTTAGCTCATGGATTCCCGAGAATATCAAGAAGAAGGAG
TGTGTGTACTTCGTGGAAAGTTCCAAACTCTCGGACGCAGGGAAGGTAGTGTGTGCGTGTGGTTATACCC
ACGAGCAACACTTGGAGGTGGCCATCAAGCCACACACCTTCCAGGGCAAGGAGTGGGATCCAAAGAAACA
CGTCCAAGAGATGCCCACAGATGCCTTTGGTGACATCGTTTTCACAGACCTGAGCCAGAAAGTGGGGAAG
TATGTCCGGGTCTCCCAGGACACGCCCTCCAGTGTCATCTACCAGCTCATGACCCAGCACTGGGGCCTAG
ATGTCCCCAACCTCCTCATCTCCGTGACCGGTGGGGCCAAGAACTTCAACATGAAGCTGAGGCTGAAGAG
CATCTTCCGGAGAGGCTTGGTCAAGGTGGCTCAAACCACGGGGGCCTGGATCATCACTGGAGGATCCCAC
ACAGGCGTGATGAAGCAGGTGGGCGAAGCGGTACGGGACTTCAGTCTGAGCAGCAGCTGCAAAGAAGGTG
AAGTCATCACTATTGGCGTAGCCACGTGGGGCACCATCCACAACCGCGAGGGACTGATCCATCCCATGGG
AGGCTTCCCCGCCGAGTACATGCTGGATGAGGAAGGCCAAGGGAACCTGACCTGCTTGGACAGCAACCAT
TCCCACTTCATCTTGGTGGATGATGGGACCCACGGGCAATATGGTGTGGAGATTCCGCTGAGGACTAAGC
TGGAAAAGTTCATCTCAGAGCAAACGAAGGAAAGGGGAGGTGTGGCCATCAAGATCCCCATTGTCTGCGT
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CCATCTCCTTGATCCAGCAGAAGCTCAGCATATTCTTCCAGGAGATGTTTGAGACTTTCACCGAAAACCA
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GGCAAGGATGGTCAGCAGGATGTGGATGTGGCCATTCTGCAGGCGTTACTGAAAGCCTCTCGAAGCCAAG
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TCGCAGTGAGATCTTCACCGATGAATGGCAGTGGAAGCCTGCAGATCTGCATCCCATGATGACGGCCGCT

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CTCATCTCCAACAAGCCTGAGTTCGTGAGGCTCTTTCTGGAGAATGGGGTGCGGCTCAAGGAGTTTGTCA
CTTGGGATACTCTTCTCTGCCTGTACGAGAACCTGGAGCCGTCCTGTCTCTTCCACAGCAAGCTACAGAA
GGTGCTGGCCGAAGAACAGCGCTTAGCCTATGCATCTGCAACACCCCGCCTGCACATGCACCATGTGGCC
CAGGTGCTTCGTGAACTCCTGGGGGACTCCACGCAGCTGCTGTACCCCCGGCCCCGGTACACTGACAGGC
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GCGATCAACAGGCCACGTTACCTTCACCATTGACCCAGTCCGTGACCTTCTCATTTGGGCCGTTATCCAG
AACCACAGGGAGCTGGCAGGCATCATCTGGGCTCAGAGTCAGGACTGTACTGCCGCAGCACTGGCCTGTA
GCAAGATCCTGAAGGAGCTGTCCAAGGAGGAGGAAGATACAGACAGCTCTGAGGAGATGCTGGCACTGGC
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TTCACTATTAGCAAGACACTGGGGCCCAAGATAATCATCGTGAAGCGGATGATGAAGGACGTCTTCTTCT
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GAGGTGCAGGAACACACAGACCAGATCTGGAAATTCCAGCGCCACGACCTGATCGAGGAGTACCATGGCC
GTCCCCCGGCACCTCCCCCACTCATCCTCCTCAGCCACCTGCAGCTCCTGATCAAGAGGATTGTCCTGAA
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TGGGAACTGTACCTGAAGGAGAACTACCTGCAGAACCAGCAGTACCAGCAGAAACAGCGTCCAGAGCAGA
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TGGGCGGCAGAGTTTCTGATCTACGATCCTCCCTTTTACACCGCTGAGAAGGATGTGGCTCTCACAGACC
CCGTGGGAGACACTGCAGAACCTCTGTCTAAGATCAGTTACAACGTCGTGGATGGACCGACGGACCGTCG
CAGCTTCCATGGAGTCTACGTGGTCGAGTATGGGTTCCCGTTGAACCCCATGGGCCGCACAGGGTTGCGT
GGTCGTGGGAGCCTCAGCTGGTTTGGTCCCAACCACACTCTGCAGCCAGTTGTCACCCGGTGGAAGAGGA
ACCAGGGTGGAGCCATCTGCCGGAAGAGTGTCAGGAAGATGCTGGAGGTGCTAGTGATGAAGCTGCCTCG
CTCTGAGCACTGGGCCTTGCCTGGGGGCTCTAGGGAGCCAGGGGAGATGCTACCACGGAAGCTGAAACGG
GTCCTCCGGCAGGAGTTCTGGGTGGCCTTTGAGACCTTGCTGATGCAAGGTACAGAGGTATACAAAGGGT
ACGTGGATGACCCAAGGAACACAGACAATGCCTGGATCGAGACAGTGGCTGTCAGCATCCATTTTCAGGA
CCAGAATGATATGGAGCTGAAGAGGCTGGAAGAGAACCTGCACACTCATGATCCAAAGGAGTTGACCCGT
GACCTGAAGCTGTCTACTGAATGGCAGGTGGTAGACCGGCGGATCCCTCTGTATGCGAACCACAAGACCA
TCCTCCAGAAGGTGGCCTCACTGTTTGGAGCTCACTTCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja1826_a06.zip

Restriction Sites: SgfI-MluI

ACCN: NM_138301

Insert Size:	4521 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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
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:	BC141391, AAI41392
RefSeq Size:	7292 bp
RefSeq ORF:	4521 bp
Locus ID:	28240
UniProt ID:	Q91YD4
Cytogenetics:	10 39.72 cM

Gene Summary: Nonselective, voltage-independent cation channel that mediates Na(+) and Ca(2+) influx, leading to increased cytoplasmic Ca(2+) levels (PubMed:11804595, PubMed:19454650, PubMed:21753080, PubMed:22493272). Functions as ligand-gated ion channel. Binding of ADP-ribose to the cytoplasmic Nudix domain causes a conformation change; the channel is primed but still requires Ca(2+) binding to trigger channel opening. Extracellular calcium passes through the channel and increases channel activity (By similarity). Also contributes to Ca(2+) release from intracellular stores in response to ADP-ribose (PubMed:21753080). Plays a role in numerous processes that involve signaling via intracellular Ca(2+) levels (PubMed:21753080). Besides, mediates the release of lysosomal Zn(2+) stores in response to reactive oxygen species, leading to increased cytosolic Zn(2+) levels (By similarity). Activated by moderate heat (35 to 40 degrees Celsius) (PubMed:27533035, PubMed:27562954). Activated by intracellular ADP-ribose, beta-NAD (NAD(+)) and similar compounds, and by oxidative stress caused by reactive oxygen or nitrogen species (PubMed:19454650, PubMed:21753080, PubMed:22493272). The precise physiological activators are under debate; the true, physiological activators may be ADP-ribose and ADP-ribose-2'-phosphate. Activation by ADP-ribose and beta-NAD is strongly increased by moderate heat (35 to 40 degrees Celsius) (By similarity). Likewise, reactive oxygen species lower the threshold for activation by moderate heat (37 degrees Celsius) (PubMed:22493272, PubMed:25817999). Plays a role in mediating behavorial and physiological responses to moderate heat and thereby contributes to body temperature homeostasis (PubMed:27533035, PubMed:27562954). Plays a role in insulin secretion, a process that requires increased cytoplasmic Ca(2+) levels (PubMed:20921208, PubMed:25817999). Required for normal IFNG and cytokine secretion and normal innate immune immunity in response to bacterial infection (PubMed:21709234). Required for normal phagocytosis and cytokine release by macrophages exposed to zymosan (in vitro) (PubMed:22493272). Plays a role in dendritic cell differentiation and maturation, and in dendritic cell chemotaxis via its role in regulating cytoplasmic Ca(2+) levels (PubMed:21753080). Plays a role in the regulation of the reorganization of the actin cytoskeleton and filopodia formation in response to reactive oxygen species via its function in increasing cytoplasmic Ca(2+) and Zn(2+) levels (By similarity). Confers susceptibility to cell death following oxidative stress (PubMed:25562606). [UniProtKB/Swiss-Prot Function]