

Product datasheet for **MC222327**

Trpv4 (NM_022017) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Trpv4 (NM_022017) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Trpv4
Synonyms:	0610033B08Rik; OTRPC4; Trp12; VR-OAC; VRL-2; VROAC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_022017, the custom clone sequence may differ by one or more nucleotides

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ATGGCAGATCCTGGTGATGGTCCCCGTGCAGCGCCTGGGGAGGTGGCTGAGCCCCCTGGAGATGAGAGTG
GTACCTCTGGTGGGAGGCCTTCCCCCTCTCTCCCTGGCCAATCTGTTTGAGGGGGAGGAAGGCTCCTC
TTCTCTTTCCCCGGTGGATGCTAGCCGCCCTGTGGCCCTGGCGATGGACGTCCAACCTGCGTATGAAG
TTCCAGGGCGCTTCCGCAAGGGGGTACCCAACCCCATTTGACCTGTTGGAGTCCACCTGTACGAGTCTC
CAGTAGTGCTGGGCCAAGAAAGCGCCCATGGATTCTTGTTCGACTACGGCACTTACCCTCACCAACC
CAGTGACAACAAGAGATGGAGGAGAAAGGTCGTGGAGAAGCAGCCACAGAGCCCCAAAGCTCCTGCACCC
CAGCCACCCCATCCTCAAAGTCTTCAATCGGCCATCCTCTTTGACATTGTGTCCCGGGGCTCCACTG
CGGACCTAGATGGACTGCTCTCTTCTTGTGACCACAAGAAGCGCCTGACTGATGAGGAGTCCGGGA
GCCGTCCACGGGAAGACCTGCCTGCCAAGGCGCTGCTGAACCTAAGCAACGGGCGCAACGACACCATC
CCGGTGTGCTGGACATTGCGGAGCGCACCGGCAACATGCGTGAATTCATCAACTCGCCCTCAGAGACA
TCTACTACCGAGGCCAGACATCCCTGCACATTGCCATCGAACGGGCGTGAAGCACTACGTGGAGCTGCT
GGTGGCCAGGGAGCCGACGTGCACGCCAGGCCCGCGGCGCTTCTTCCAGCCCAAGGATGAGGGAGGC
TACTTCTACTTTGGGGAGCTGCCCTTGTCCCTGGCAGCCTGCACCAACCAGCCGCACATCGTCAACTACC
TGACAGAGAACCCTCACAAGAAAGCTGACATGAGGCGACAGGACTCGAGGGGGAACACGGTGTGCACGC
GCTGGTGGCCATCGCCGACAACACCCGAGAGAACCAAGTTTGTACCAAGATGTACGACCTGTGCTT
CTCAAGTGTTACGCCTTCCCCGACAGCAACCTGGAGACAGTTCTCAACAATGATGGCCTTTCGCCTC
TCATGATGGCTGCCAAGACAGGCAAGATCGGGGCTTTTCAGCACATCATCCGACGTGAGGTGACAGATGA
GGACACCCGGCATCTGTCTCGCAAGTCAAGGACTGGCCTATGGCCTGTGTATTCTTCTCTACGAC
CTCTCCTCCCTGGACACATGCGGGGAGGAGGTGTCGTGCTGGAGATCCTGGTGTACAACAGCAACGTCG
AGAACCGCCATGAGATGCTGGCTGTAGAGCCATTAAACGAACTGTTGAGAGACAAGTGGCGTAAGTTTGG
GGCTGTGCTCTTACATCAACGTGGTCTCCTATCTGTGTGCCATGGTCATCTTACCCTCACCGCTAC
TATCAGCCACTGGAGGCGACGCCACCCTACCCTTACCGACCACAGTGGACTACCTGAGGCTGGCTGGCG
AGGTATCACGCTCTTACAGGAGTCTGTTCTTTACCAGTATCAAAGACTTGTTCACGAAGAAATG
CCCTGGAGTGAATTCTCTCTTCTCGTGCATGGCTCCTCCAGTTACTCTACTTACTCTGTGCTGGTG
GTTGTCTCTCGGCGCTCTACCTGGCTGGGATCGAGGCCACCTGGCTGTGATGGTCTTTCGCCTGGTCC
TGGGCTGGATGAATGCGCTGTACTTCACGCGCGGTTGAAGCTGACGGGGACCTACAGCATCATGATTCA
GAAGATCCTCTCAAAGACCTCTCCGCTTCTGCTTGTGTACCTGCTCTTCATGATCGGCTATGCCTCA
GCCTGGTCAACCCTCTGAATCCGTGCACCAACATGAAGGTCTGTGACGAGGACCAGAGCAACTGCACGG
TGCCACGTATCCTGCGTGCCGCGACAGCGAGACCTTCAGCGCCTTCTCCTGGACCTCTTCAAGCTCAC
CATCGGCATGGGAGACCTGGAGATGCTGAGCAGCGCAAGTACCCCGTGGTCTTTCATCCTCCTGCTGGTC
ACCTACATCATCCTCACCTTCGTGCTCCTGTTGAACATGCTTATCGCCCTCATGGGTGAGACCGTGGGCC
AGGTGTCAAGGAGAGCAAGCACATCTGGAAGTTGCAGTGGGCCACCACCATCCTGGACATCGAGCGTTC
CTTCCCTGTGTTCTGAGGAAGGCCTCCGCTCCGGAGAGATGGTACTGTGGCAAGAGCTCAGATGGC
ACTCCGGACCGCAGGTGGTCTCAGGGTGGACGAGGTGAACTGGTCTCACTGGAACCAGAACTTGGGCA
TCATTAACGAGGACCCTGGCAAGAGTAAATCTACCAGTACTATGGCTTCTCCACACCGTGGGGCGCT
TCGTAGGATCGTTGGTCTCGGTGGTGGCCCGGTAGTGGAGCTGAACAAGAAGTCAAGCGCAGATGAA
GTGGTGTACCCCTGGATAACCTAGGGAACCCCACTGTGACGGCCACCAGCAGGGCTACGCTCCCAAGT
GGAGGACGGACGATGCCCACTGTAG
    
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Restriction Sites: Sgfl-Mlul
ACCN: NM_022017
Insert Size: 2616 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: [BC127052](#), [AAI27053](#)

RefSeq Size: 2777 bp

RefSeq ORF: 2616 bp

Locus ID: 63873

UniProt ID: [Q9EPK8](#)

Cytogenetics: 5 F

Gene Summary:

Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity (PubMed:11094154). Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification (PubMed:12093812, PubMed:14691263, PubMed:16368742, PubMed:16571723). Also activated by heat, low pH, citrate and phorbol esters (PubMed:14691263). Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin-dependent mechanism with a negative feedback mechanism (By similarity). Acts as a regulator of intracellular Ca(2+) in synoviocytes (By similarity). Plays an obligatory role as a molecular component in the nonselective cation channel activation induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and also regulates production of IL-8 (By similarity). Together with PKD2, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). Promotes cell-cell junction formation in skin keratinocytes and plays an important role in the formation and/or maintenance of functional intercellular barriers (PubMed:20413591). Negatively regulates expression of PPARGC1A, UCP1, oxidative metabolism and respiration in adipocytes (PubMed:23021218). Regulates expression of chemokines and cytokines related to proinflammatory pathway in adipocytes (PubMed:23021218). Together with AQP5, controls regulatory volume decrease in salivary epithelial cells (PubMed:16571723). Required for normal development and maintenance of bone and cartilage (By similarity).[UniProtKB/Swiss-Prot Function]