

Product datasheet for **RG229182**

TMEM64 (NM_001008495) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
 Product Name: TMEM64 (NM_001008495) Human Tagged ORF Clone
 Tag: TurboGFP
 Symbol: TMEM64
 Mammalian Cell Selection: Neomycin
 Vector: pCMV6-AC-GFP (PS100010)
 E. coli Selection: Ampicillin (100 ug/mL)
 ORF Nucleotide Sequence: >RG229182 representing NM_001008495
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCGGAGCCCGGGCGGGATCCTGCTCCAGGCGCTGCCCCGGCTGCTGCAGCACGCCGCCCTCCCGGGCC
 TCGCCGAGCTGCCGGCCCGCTGGGCCCTGCCCGGGGTGCGGGCGGGGACGGCCCGGGCGGACCGCCTTCC
 CCGCGGGGGCGGGGCGAGCGCGGGCGGCGAGCAGCGGGCCCTCGGGCGCCCTGCTCGGCGCCTATCTG
 GAGCGCCACGGTCCGCCGAGGCTTCGGAGCTGCCGAGCCGGCGGGGCTTGGCGGGCGGCCCGGGA
 GTGGCGGGCGGGCGTGGTGGTCGGCGTGGCTGAGGTGAGAACTGGCGTGTCTGCCAGCAGC
 CTGTTGGTGCCGAGCCTCGTGCTGGTCTGCGTGTGGCCGCCCTGTGCTTCGTTCCCTGGCCCTGGTC
 CGCCGCTACCTTACCACCTCCTGCTGTGGGTGGAGAGCCTTGACTCGTGTGGGGTCTGCTCTTCG
 TCGTGGGCTTCATCGTGGTCTCTTCCCTGCGGCTGGGGCTACATCGTGTCAACGTGGCCGCTGGCTA
 CCTGTACGGCTTCGTGCTGGGCATGGGTCTGATGATGGTGGGCTCCTCATCGGCACCTTCATCGCCAT
 GTGGTCTGCAAGCGGCTCCTACCAGCTGGGTGGCCGCCAGGATCCAGAGCAGCGAGAAGCTGAGCGCGG
 TTATTCGCGTAGTGGAGGAGGAAGCGGCTGAAAGTGGTGGCGTGGCCAGACTGACACCCATACCTTT
 TGGGCTTCAGAAATGCAGTGTTCGATTACTGATCTCTCATTACCAACTATCTGATGGCATCTTCGGTT
 GGACTGCTTCTACCCAGCTTCTGAATCTTACTTGGGTACCACCCTGCGGACAATGGAAGATGTCATTG
 CAGAACAGAGTGTAGTGATATTTGTTTTTTGTTTACAGATTATTATAAGTATAGGCCTCATGTTTTA
 TGTAGTTCATCGAGCTCAAGTGAATTGAATGCAGCTATTGTAGCTTGTGAAATGGAAGTAAATCTTCT
 CTGGTTAAAGGCAATCAACCAAATACCAGTGGCTTCTCATTCTACAACAAGAGGACCCTAACATTTCTG
 GAGGTGGAATCAATGTTGTA

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG229182 representing NM_001008495
Red=Cloning site Green=Tags(s)

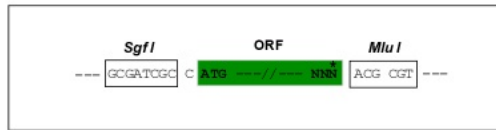
MRSPGGILLQALPRLQHAALPGLAELPARWALPRGAGGDPADRLPRGGGASAAAAAASGALLGAYL
 ERHGPPEASELPEPGGALAGPGSGGGVVVGVAEVRNWRCCCLGSTCWCRLVLCVLAALCFASLALV
 RRYLHLLLLWVESLDSLGLVLLFVVGFI VVSFPCGWGYIVLNVAAGYL YGFVLMGLMMVGV LIGTFIAH
 VVCKRLLTAWVAARIQSSEKLSAVIRVVEGGSGLKVVVALARLTPIPFGLQNAVFSITDLSLPNYLMASSV
 GLLPTQLLNSYLGTTLRTEMEDIAEQSVSGYFVFLQIIISIGLMFYVVHRAQVELNAAIVACEMELKSS
 LVKGNQPNTSGSSFYNKRTLTFSGGGINVV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



ACCN: NM_001008495

ORF Size: 1140 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_001008495.4](#)

RefSeq Size: 4819 bp

RefSeq ORF: 1143 bp

Locus ID: 169200

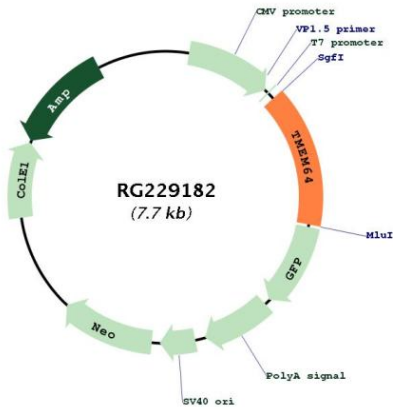
UniProt ID: [Q6YI46](#)

Cytogenetics: 8q21.3

Protein Families: Transmembrane

Gene Summary: Positively regulates TNFSF11-induced osteoclast differentiation. Acts as a regulator of TNFSF11-mediated Ca(2+) signaling pathways via its interaction with SERCA2 which is critical for the TNFSF11-induced CREB1 activation and mitochondrial ROS generation necessary for proper osteoclast generation. Association between TMEM64 and SERCA2 in the ER leads to cytosolic Ca (2+) spiking for activation of NFATC1 and production of mitochondrial ROS, thereby triggering Ca (2+) signaling cascades that promote osteoclast differentiation and activation. Negatively regulates osteoblast differentiation and positively regulates adipocyte differentiation via modulation of the canonical Wnt signaling pathway. Mediates the switch in lineage commitment to osteogenesis rather than to adipogenesis in mesenchymal stem cells by negatively regulating the expression, activity and nuclear localization of CTNNB1. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG229182