

Product datasheet for **RC203420**

Tuftelin 1 (TUFT1) (NM_020127) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tuftelin 1 (TUFT1) (NM_020127) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tuftelin 1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203420 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAACGGGACGCGGAAGTGGTGTACCCTGGTGGACGTGCACCCAGAGGACCAGGCGGGGCGAGCGTGG
ACATTCTCAGGCTGACTCTCCAGGGTGAAGTGCACAGGAGATGAAGTGAACACATAGCCCAGAAGGCGGG
CAGGAAGACCTATGCCATGGTGTCCAGCCACTCAGCTGGTCATTCTGGCTTCAAGACTGGTGGAGTCC
CATGATGGACATGAGGAGATCATTAAAGGTGTACTTGAAGGGGAGGTCTGGAGACAAGATGATTCACGAGA
AGAATATTAACCCAGCTGAAGAGTGAGGTCCAGTACATCCAGGAGGCCAGGAAGTGCCTACAGAAGCTCCG
GGAGGATATAAGTAGCAAGCTTGACAGGAACCTAGGAGATTCTCTCCATCGACAGGAGATACAGGTGGTG
CTAGAAAAGCCAAATGGCTTTAGTCAGAGTCCACAGCCCTGTACAGCAGCCACCTGAGGTGGACACCT
GTATAAATGAGGATGTTGAGAGCTTGAGGAAGACGGTGCAGGACTTGCTGGCCAAGCTTCAGGAGGCCAA
GCGGCAACACCAGTCAGACTGTGTGGCTTTTGGAGTCCACTCAGCCGGTACCAGAGGGAAGCAGAAACA
AGTAATGTGGCCCTTCAGAGAGAGGAGGACAGAGTGGAGCAGAAAGAGGCAGAAGTCGGAGAGCTGCAGA
GGCGCTTGCTAGGGATGGAGACGGAGCATCAGGCCTTACTGGCGAAAAGTGAAGGAAAGGGGAGGTGGCCCT
AGAGGAACTTCGGAGCAACAATGCTGACTGCCAAGCAGAACGAGAAAAGGCTGCTACCCTGAAAAGGAA
GTGGCCGGGTTGCGGGAGAAGATCCACCACTTGGATGACATGCTCAAGAGCCAGCAGCGGAAAGTCCGGC
AAATGATAGAGCAGCTCCAGAATTCAAAAGCTGTGATCCAGTCAAAGGACGCCACCATCCAGGAGCTCAA
GGAGAAAATCGCCTATCTGGAGGCAGAGAAATTTAGAGATGCATGACCGGATGGAACACCTGATAGAAAA
CAAATCAGTCATGGCAACTTCAGCACCCAGGCCCGGGCCAAGACAGAGAAACCCGGGCAGTATTAGGATAT
CCAAGCCGCTAGCCCGAAGCCCATGCCTGTCATCCGAGTGGTGGAAACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC203420 protein sequence
Red=Cloning site Green=Tags(s)

MNGTRNWTCLVDVHPEDQAAGSVDILRLTLQGELTGDELEHIAQKAGRKTYAMVSSHSAGHSLASELVES
 HDGHEEIIKVVYLKGRSGDKMIEHEKNINQLKSEVQYIQEARNCLQKLREDISSKLDRLGDSLHRQEIQVV
 LEKPNGFSQSPTALYSSPPEVDTCINEDVESLRKTVQDLLAKLQEAQRQHQSDCVAFEVTL SRYQREAEQ
 SNVALQREEDRVEQKEAEVGE LQRRLGMETEHQALLAKVREGEVALEELRSNNADQEAEREKAATLEKE
 VAGLREKIHLLDMLKKSQQRKVRQMIIEQLQNSKAVIQSKDATIQELKEKIAYLEAENLEMHDRMEHLIEK
 QISHGNFSTQARAKTENPGSIRISKPPSPKMPVIRVVET

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6206_h06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_020127

ORF Size: 1170 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_020127.3](#)

RefSeq Size: 3127 bp

RefSeq ORF: 1173 bp

Locus ID: 7286

UniProt ID: [Q9NNX1](#)

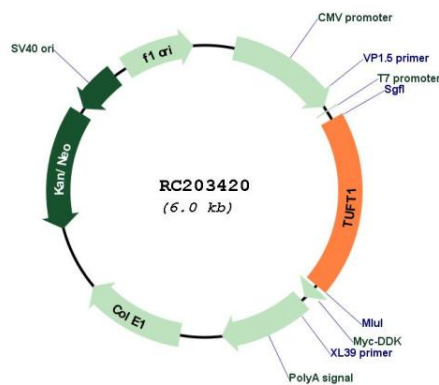
Cytogenetics: 1q21.3

Protein Families: Secreted Protein

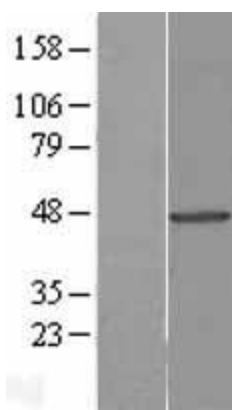
MW: 44.3 kDa

Gene Summary: Tuftelin is an acidic protein that is thought to play a role in dental enamel mineralization and is implicated in caries susceptibility. It is also thought to be involved with adaptation to hypoxia, mesenchymal stem cell function, and neurotrophin nerve growth factor mediated neuronal differentiation. [provided by RefSeq, Aug 2014]

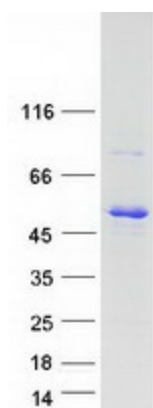
Product images:



Circular map for RC203420



Western blot validation of overexpression lysate (Cat# [LY412667]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203420 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TUFT1 protein (Cat# [TP303420]). The protein was produced from HEK293T cells transfected with TUFT1 cDNA clone (Cat# RC203420) using MegaTran 2.0 (Cat# [TT210002]).