

Product datasheet for **RG203005**

Protein atonal homolog 8 (ATOH8) (NM_032827) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Protein atonal homolog 8 (ATOH8) (NM_032827) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Protein atonal homolog 8
Synonyms:	bHLHa21; HATH6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG203005 representing NM_032827 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGCACATCCCGTCTCGAGGACGGGCCGTGGAAGACCGTGTGCGTGAAGGAGCTGAACGGCCTTA
AGAAGCTCAAGCGAAAGGCAAGGAGCCGGCGCGCGCAACGGCTATAAACTTTCCGACTGGACTT
GGAAGCGCCCGAGCCCCGCGCGTAGCCACCAACGGGCTGCGGGACAGGACCCATCGGCTGCAGCCGGTC
CCGGTACCGGTGCCGTGCCAGTCCAGTGGCGCCGGCCGTTCCCCAAGAGGGGGCACGGACACAGCCG
GGGAGCGCGGGGCTCTCGGGCGCCGAGGTCTCCGACGCGCGGAAACGCTGCTTCGCCCTAGGCGCAGT
GGGGCCAGGACTCCCCACGCCGCGCGCGCCGCTCCTGCGCCCCAGAGCCAGGCACCTGGGGGCCCA
GAGGCACAGCCTTTCCGGGAGCCGGGTCCGCGTCTCGCATCTTGCTGTGCGCACCGCCCGCGCGCCCCG
CGCCGTGAGCACCCCCAGCACCGCCAGCGCCCCCGGAGTCCACTGTGCGCCCTGCGCCCCGACGCGCCC
CGGGAAAGTTCTACTCGTCAATTTACACGTAATTTACAATAACCACCAGGATTCTCCGCGTCGCT
AGGAAACGACCGGGCGAAGCGACTGCCGCTCCTCCGAGATCAAAGCCCTGCAGCAGACCCGAGGCTCC
TGGCGAACGCCAGGGAGCGGACGCGGTGCACACCATCAGCGCAGCCTTCGAGGCGCTCAGGAAGCAGGT
GCCGTGCTACTCATATGGGCAGAAGCTGTCCAACTGGCCATCCTGAGGATCGCTGTAACATACCTCTG
TCCCTGGCGCGGCTGGCTGACCTTGACTACAGTGCCGACCACAGCAACCTCAGTTCTCCGAGTGTGTGC
AGCGCTGCACCCGACCCCTGCAGGCCGAGGGACGTGCCAAGAAGCGCAAGGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG203005 representing NM_032827
 Red=Cloning site Green=Tags(s)

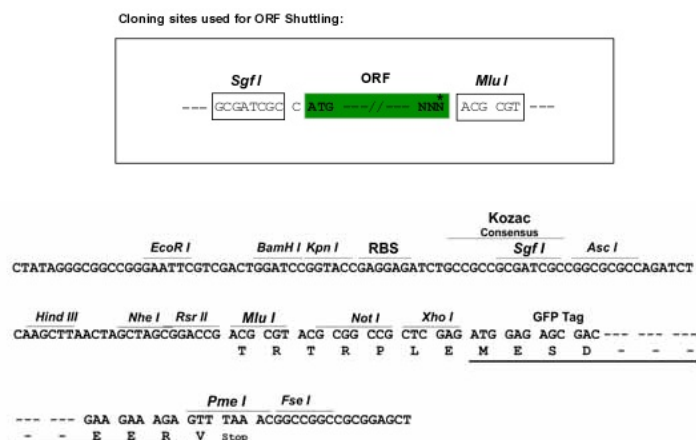
MKHIPVLEDGPWKTVCKELNGLKKLKRKGKEPARRANGYKTFRLDLEAPEPRAVATNGLRDRTHRLQPV
 PVPVPVPVPVAPVAPVPRGGTDAGERGGSRAPEVSDARKRCFALGAVGGLPTPPPPPPAPQSQAPGGP
 EAQPFREPGPRILLCAPPARPAPSAPPAPPPESTVRPAPTRPGESSYSSISHVIYNNHQDSSASP
 RKRPGEATAASSEIKALQQTRLLANARERTRVHTISAAFEALRKQVPCYSYGQKLSKLAILRIACNYIL
 SLARLADLDYSADHSNLSFSECVQRCTRLQAEGRAKKRKE

TRTRPLE – GFP Tag – V

Chromatograms: https://cdn.origene.com/chromatograms/ja1768_g04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_032827

ORF Size: 963 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_032827.5](#)

RefSeq Size: 2455 bp

RefSeq ORF: 966 bp

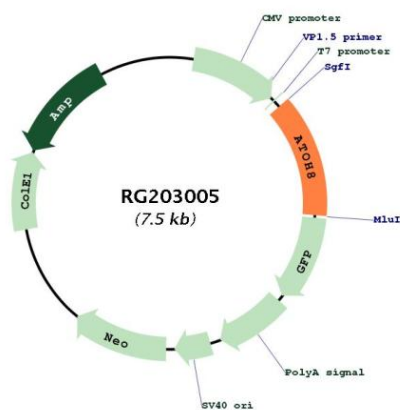
Locus ID: 84913

UniProt ID: [Q96SQ7](#)

Cytogenetics: 2p11.2

Gene Summary: Transcription factor that binds a palindromic (canonical) core consensus DNA sequence 5'-CANNTG- 3' known as an E-box element, possibly as a heterodimer with other bHLH proteins (PubMed:24236640). Regulates endothelial cell proliferation, migration and tube-like structures formation (PubMed:24463812). Modulates endothelial cell differentiation through NOS3 (PubMed:24463812). May be implicated in specification and differentiation of neuronal cell lineages in the brain (By similarity). May participate in kidney development and may be involved in podocyte differentiation (By similarity). During early embryonic development is involved in tissue-specific differentiation processes that are dependent on class II bHLH factors and namely modulates the differentiation program initiated by the pro-endocrine factor NEUROG3 (By similarity). During myogenesis, may play a role during the transition of myoblasts from the proliferative phase to the differentiation phase (By similarity). Positively regulates HAMP transcription in two ways, firstly by acting directly on the HAMP promoter via E-boxes binding and indirectly through increased phosphorylation of SMAD protein complex (PubMed:24236640). Repress NEUROG3-dependent gene activation in a gene-specific manner through at least two mechanisms; requires only either the sequestering of a general partner such as TCF3 through heterodimerization, either also requires binding of the bHLH domain to DNA via a basic motif (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG203005