

Product datasheet for RC203005

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:	Myc-DDK
Symbol:	Protein atonal homolog 8
Synonyms:	bHLHa21; HATH6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	<p>>RC203005 representing NM_032827</p> <p>Red=Cloning site Blue=ORF Green=Tags(s)</p>

TTTTGTATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGAAGCACATCCCGGTCTCGAGGACGGGCCGTGGAAGACCGTGTGCGTGAAGGAGCTGAACGGCCTTA
 AGAAGCTCAAGCGGAAAGGCAAGGAGCCGGCGCGCGCAACGGCTATAAACTTTCCGACTGGACTT
 GGAAGCGCCCGAGCCCCGCGCGTAGCCACCAACGGGCTGCGGGACAGGACCCATCGGCTGCAGCCGGTC
 CCGGTACCGGTGCCGTGCCAGTCCCAGTGGCGCCGGCCGTTCCCCAAGAGGGGGCACGGACACAGCCG
 GGGAGCGCGGGGCTCTCGGGCGCCGAGGTCTCCGACGCGCGGAAACGCTGCTTCGCCCTAGGCGCAGT
 GGGGCCAGGACTCCCCACGCCGCGCGCGCCGCTCCTGCGCCCCAGAGCCAGGACCTGGGGGCCCA
 GAGGCACAGCCTTTCCGGAGCCGGGTCCGCGTCTCGCATCTTGCTGTGCGCACCGCCCGCGCGCCCCG
 CGCCGTGAGCACCCCCAGCACCGCCAGCGCCCCCGGAGTCCACTGTGCGCCCTGCGCCCCGACGCGCCC
 CGGGGAAAGTTCTACTCGTCAATTTACACGTAATTTACAATAACCACCAGGATTCTCCGCGTCGCT
 AGGAAACGACCGGGCGAAGCGACTGCCGCTCCTCCGAGATCAAAGCCCTGCAGCAGACCCGAGGCTCC
 TGGCGAACGCCAGGGAGCGGACGCGGTGCACACCATCAGCGCAGCCTTCGAGGCGCTCAGGAAGCAGGT
 GCCGTGCTACTCATATGGGCAGAAGCTGTCCAACTGGCCATCCTGAGGATCGCCTGTAACATACCTG
 TCCCTGGCGCGGCTGGCTGACCTTGACTACAGTGCCGACCACAGCAACCTCAGCTTCTCCGAGTGTGTC
 AGCGCTGCACCCGACCCCTGCAGGCCGAGGGACGTGCCAAGAAGCGCAAGGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC203005 representing NM_032827
 Red=Cloning site Green=Tags(s)

MKHIPVLEDGPWKTVCKELNGLKKLKRKGKEPARRANGYKTFRLDLEAPEPRAVATNGLRDRTHRLQPV
 PVPVPVPVPVAPAVPPRGDTAGERRGSRAPEVSDARKRCFALGAVGGLPTPPPPPPAPQSQAPGGP
 EAQPFREPGPRILLCAPPARPAPSAPPAPPPESTVRPAPPTRPGESSYSSISHVIYNNHQDSSASP
 RKRPGEATAASSEIKALQQTRLLANARERTRVHTISAAFEALRKQVPCYSYGQKLSKLAILRIACNYIL
 SLARLADLDYSADHSNLSFSECVQRCTRLQAEGRAKKRKE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4520_c05.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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_032827.5](#)

RefSeq Size: 2455 bp

RefSeq ORF: 966 bp

Locus ID: 84913

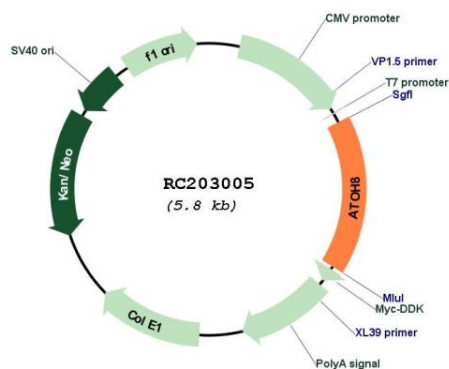
UniProt ID: [Q96SQ7](#)

Cytogenetics: 2p11.2

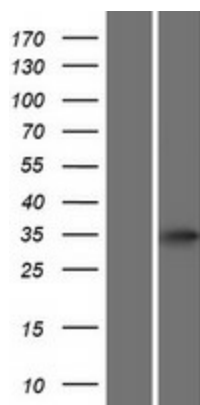
MW: 34.5 kDa

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 RC203005



Western blot validation of overexpression lysate (Cat# [LY409915]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203005 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).