

Product datasheet for **SC305507**

Protein atonal homolog 8 (ATOH8) (NM_032827) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Protein atonal homolog 8 (ATOH8) (NM_032827) Human Untagged Clone
Tag:	Tag Free
Symbol:	Protein atonal homolog 8
Synonyms:	bHLHa21; HATH6
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_032827 edited ATGAAGCACATCCCGTCTCGAGGACGGGCGTGAAGACCGTGTGCGTGAAGGAGCTG AACGGCCTTAAGAAGCTCAAGCGAAAGCAAGGAGCCGCGCGCGGAACGGCTAT AAAACCTTTCCGACTGGACTTGAAGCGCCGAGCCCGCGCCGTAGCCACCAACGGGCTG CGGGACAGGACCCATCGGCTGCAGCCGGTCCCGGTACCGGTGCCGTGCCAGTCCCAGTG GCGCCGGCGTTCCCCAAGAGGGGGCACGGACACAGCCGGGAGCGCGGGGCTCTCGG GCGCCCGAGGTCTCCGACGCGCGAAACGCTGCTTCGCCCTAGGCGCAGTGGGGCCAGGA CTCCCCACGCGCGCCGCGCCGCTCCTGCGCCCCAGAGCCAGGCACCTGGGGCCCCA GAGGCACAGCCTTCCGGGAGCCGGTCCGCGTCTCGCATCTTGCTGTGCGCACCGCC GCGCGCCCGCGCGTCAAGCCCGAGCCCGCCGAGCCCGCCCGGAGTCCACTGTGCGC CCTGCGCCCCGACGCGCCCCGGGAAAGTTCTACTCGTCAATTTACACGTAATTTAC AATAACCACCAGGATTCCTCCGCGTCCGCTAGGAAACGACCGGGCGAAGCGACTGCGCC TCTCCGAGATCAAAGCCCTGCAGCAGACCCGGAGGCTCCTGGCGAACGCCAGGGAGCGG ACGCGGGTGCACACCATCAGCGCAGCCTTCGAGGCGCTCAGGAAGCAGGTGCCGTGCTAC TCATATGGGCAGAAGCTGTCAAACCTGGCCATCCTGAGGATCGCCTGTAACCTACATCCTG TCCCTGGCGCGGCTGGCTGACCTTGACTACAGTGCCGACCACAGCAACCTCAGCTTCTCC GAGTGTGTGCAGCGCTGCACCCGACCCCTGCAGGCCGAGGGACGTGCCAAGAAGCGCAAG GAGTGA
Restriction Sites:	Please inquire
ACCN:	NM_032827
Insert Size:	1000 bp



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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](#)

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_032827.3](#), [NP_116216.1](#)

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]