

Product datasheet for **KN403005**

Protein atonal homolog 8 (ATOH8) Human Gene Knockout Kit (CRISPR)

Product data:

| | |
|---------------|---|
| Product Type: | Knockout Kits (CRISPR) |
| Format: | 2 gRNA vectors, 1 linear donor |
| Donor DNA: | EF1a-GFP-P2A-Puro |
| Symbol: | Protein atonal homolog 8 |
| Locus ID: | 84913 |
| Components: | KN403005G1 , Protein atonal homolog 8 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN403005G2 , Protein atonal homolog 8 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN403005D , Linear donor DNA containing LoxP-EF1A-tGFP-P2A-Puro-LoxP: The sequence below is cassette sequence only. The linear donor DNA also contains proprietary target sequence. |

LoxP-EF1A-tGFP-P2A-Puro-LoxP (2739 bp)

```

ATAACTTCGT ATAATGTATG CTATACGAAG TTATCGTGAG GCTCCGGTGC CCGTCAGTGG GCAGAGCGCA
CATCGCCAC AGTCCCCGAG AAGTTGGGGG GAGGGTTCGG CAATTGAACC GGTGCCTAGA GAAGGTGGCG
CGGGGTAAC TGGGAAAGTG ATGTCGTGTA CTGGCTCCGC CTTTTCCCG AGGGTGGGGG AGAACCCTAT
ATAAGTGAC TAGTCGCCGT GAACGTTCTT TTTCCGAACG GGTTCGCCGC CAGAACACAG GTAAGTGCCG
TGTGTGGTTC CCGCGGGCCT GGCCTCTTTA CGGGTTATGG CCCTTGCGTG CCTTGAATTA CTCCACCTG
GCTGCAGTAC GTGATTCTTG ATCCCAGCT TCGGGTTGGA AGTGGGTGGG AGAGTCCGAG GCCTTGCCGT
TAAGGAGCCC CTTGCCTCG TGCTTGAGTT GAGGCCTGGC CTGGGGCTG GGGCCCGCCG GTGCGAATCT
GGTGGCACCT TCGCGCCTGT CTCGCTGCTT TCGATAAGTC TCTAGCCATT TAAAATTTTT GATGACCTGC
TGCGACGCTT TTTTCTGGC AAGATAGTCT TGTAATGCG GGCCAAGATC TGCACACTGG TATTTTCGTT
TTTGGGGCG CGGGCGGCGA CGGGGCCCGT GCGTCCCAGC GCACATGTTC GGCGAGGCGG GGCCTGCGAG
CGCGGCCACC GAGAATCGGA CGGGGGTAGT CTCAAGCTGG CCGGCCTGCT CTGGTGCCTG GCCTCGCGCC
GCCGTGTATC GCCCCGCCCT GGGCGGCAAG GCTGGCCCGG TCGGCACCAG TTGCGTGAGC GGAAAGATGG
CCGCTTCCCG GCCCTGCTGC AGGGAGCTCA AAATGGAGGA CGCGGCCTC GGGAGAGCGG GCGGGTGAGT
CACCCACACA AAGGAAAAGG GCCTTCCGT CTCAGCCGT CGTTTCATGT GACTCCACGG AGTACCGGGC
GCCGTCCAGG CACCTCGATT AGTTCTCGAG CTTTTGGAGT ACGTCTGCTT TAGGTTGGGG GGAGGGGTTT
TATGCGATGG AGTTTCCCA CACTGAGTGG GTGGAGACTG AAGTTAGGCC AGCTTGCCAC TTGATGTAAT
TCTCCTTGA ATTTGCCCTT TTTGAGTTG GATCTTGGT CATTCTCAAG CCTCAGACAG TGGTTCAAAG
TTTTTTCTT CCATTTCAAG TGTCGTGAAT GGAGAGCGAC GAGAGCGGCC TGCCCGCCAT GGAGATCGAG
TGCCGCATCA CCGGCACCCT GAACGGCGTG GAGTTCGAGC TGGTGGGCGG CGGAGAGGGC ACCCCCAGC
AGGGCCGCAT GACCAACAAG ATGAAGAGCA CCAAAGGCGC CCTGACCTTC AGCCCCTACC TGCTGAGCCA
CGTGATGGG TACGGCTTCT ACCACTTCGG CACCTACCC AGCGGCTACG AGAACCCCTT CCTGCACGCC
ATCAACAACG GCGGCTACAC CAACACCCGC ATCGAGAAGT ACGAGGACGG CGGCGTGCT CACGTGAGCT
TCAGTACCG CTACGAGGCC GGCCCGTGGA TCGGCGACTT CAAGGTGATG GGCACCGGCT TCCCCGAGGA
CAGCGTGATC TTCACCGACA AGATCATCCG CAGCAACGCC ACCGTGGAGC ACCTGCACCC CATGGGCGAT

```



```

AACGATCTGG ATGGCAGCTT CACCCGCACC TTCAGCCTGC GCGACGGCGG CTACTIONACAGC TCCGTGGTGG
ACAGCCACAT GCACTTCAAG AGCGCCATCC ACCCCAGCAT CCTGCAGAAC GGGGGCCCCA TGTTGCCTT
CCGCCGCGTG GAGGAGGATC ACAGCAACAC CGAGCTGGGC ATCGTGGAGT ACCAGCACGC CTTCAAGACC
CCGGATGCAG ATGCCGGTGA AGAAAGAGGA AGCGGAGCTA CTACTIONCAG CTTGCTGAAG CAGGCTGGAG
ACGTGGAGGA GAACCTTGA CCTATGACCG AGTACAAGCC CACGGTGGC CTCGCCACCC GCGACGACGT
CCCCAGGGCC GTACGCACCC TCGCCGCCG GTTCGCCGAC TACCCCGCCA CGGCCACAC CGTCGATCCG
GACCGCCACA TCGAGCGGGT CACCGAGCTG CAAGAACTCT TCCTCACGCG CGTCGGGCTC GACATCGGCA
AGGTGTGGGT CGCGGACGAC GCGGCCGCG TGCGGTCTG GACCACGCG GAGAGCGTCG AAGCGGGGC
GGTGTTCGCC GAGATCGGCC CGCGCATGGC CGAGTTGAGC GGTTCGCCG TGCCCGCA GCAACAGATG
GAAGGCCTCC TGGCGCCGA CCGGCCAAG GAGCCCGCT GGTTCCTGGC CACCGTCGGC GTCTCGCCG
ACCACCAGGG CAAGGTCTG GCGAGCGCG TCGTGTCCC CGGAGTGGAG GCGGCCGAGC GCGCCGGGT
GCCCGCTTC CTGGAGACT CCGCGCCCG CAACCTCCC TTCTACGAGC GGCTCGGCTT CACCGTACC
GCCGACGTC AGGTGCCGA AGGACCGCG ACCTGGTGA TGACCCGAA GCCCGGTGCC TGAAACTTGT
TTATTGCAGC TTATAATGGT TACAAATAA GCAATAGCAT CACAAATTC ACAAATAAAG CATTITTTTTC
ACTGCATTCT AGTTGTGGT TGTCCAACT CATCAATGA TCTTAATAAC TTCGTATAAT GTATGTATA CGAAGTTAT

```


Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_032827](#)

UniProt ID:

[Q96SQ7](#)

Synonyms:

bHLHa21; HATH6

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:
