

## Product datasheet for **RG202380**

### ALKBH8 (NM\_138775) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALKBH8 (NM_138775) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALKBH8
Synonyms:	ABH8; MRT71; TRM9; TRMT9; TRMT9A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>RG202380 representing NM\_138775  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGACAGCAACCATCAAAGTAATTACAACTCAGTAAAAGTGAAGAAGTTCTTAAGGAAACAGATTA  
AAGCCAAGCATACTTTGCTGAGACATGAAGGCATTGAGACAGTATCCTATGCCACTCAGAGCCTGGTTGT  
TGCCAATGGTGGTTGGGTAATGGTGTGAGTCGGAACCGCTGCTCCCGTTTTAGAGAAATGTGGACTG  
GTGGATGCTCTTAATGCCACCTAACAGCCGTAATTTGCAAGATACAGAAGTACAGAAGAATCTA  
AGAGAGCCTATGTTACCCCTCAATGGAAGAAAGTGTGGATGATTTAGGACAAAAGATCACTCTGTATTT  
GAATTTTGTGGAAAAGTGCAGTGAAGGAGTTGAGGCCCAAGCCTTACCACCAGGACTCATGGTAGTA  
GAAGAAAATAATTTCTTCTGAGGAGGAGAAAATGCTTTTGGAAAGTGTGATTGGACAGAAGATACAGACA  
ATCAAACTCTCAAAAATCCTTAAACACAGAAGAGTAAAGCATTGTTGGTTATGAGTTCCTACTATGAGAA  
CAACAATGTAGATAAAGATAAGCCATTATCTGGGGTCTTCTGACATTTGTGAAAGCTTTTGGAGAAA  
TGTTGAGGAAAAGTTACATTAACATAAACCTGATCAAATGACCATAAAATCAGTATGAACCTGGGCAAG  
GAATCCCCTCATATTGATACACATCCGCTTTTGGAGTGTGATCGTTTCTCTCAGTTTGGGGTCAGA  
GATTGTGATGGATTTAAGCACCCAGATGGCATTGCGAGTCCAGTTATGTTGCCTCGTGGAGTTTGTCTG  
GTGATGACAGGAGAACTAGATACCTTTGGACCATGGAATCACGTGCAGAAAATTTGATACTGTCAAG  
CATCTGAGAGTCTTAAAGTGAATATCACAGTGTGTTGGAGACTTAACTTTAAGCAAGAGGGGACT  
ACGAACATCATTTACATTTAGGAAAGTGAAGGCAACACCTTGTAACTGTAGTTACCCGTTGGTCTGTGAT  
AGCCAGAGGAAAGAGACTCCCCCTCATTTCCAGAGAGTGATAAAGAAGCCTCACGGCTGGAGCAAGAGT  
ACGTCCATCAGGTTTATGAAGAGATTGCTGGGCACTTCAGCAGCACAAGACATACCCCTTGGCCGCACAT  
TGTGGAGTTTTTGAAGGCTTTGCCAAGTGGTTCAATAGTGGCTGATATTGGATGTGGTAATGGAAGTAT  
CTTGGCATCAATAAGGAGTTATATGATTGGTTGTGATCGTAGCCAAAACCTTGTGGACATTTGTAGAG  
AGAGGCAATTTAGGCTTTTGTCTGTGATGCATTGGCAGTACCAGTCCGAGTGGGTCTTGTGATGCCTG  
CATCTCCATTGCTGTTATTCATCATTTTGAACAGCAGAGCGTAGAGTGGCAGCTCTCCAAGAAATGTT  
CGACTCCTGAGACCAGGTGGGAAGGCATCTTTATGTCTGGCAATGGAACAAGAATAAATAAGCAGA  
AGTCCAAGTATCTTAGAGGAAACAGAAATAGCCAAGGAAAGAAAGAGGAGATGAACAGTGATACCTCAGT  
GCAGAGGTCATTTGTGGAGCAAATGCGTGACATGGCAGTCGAGACTCGGCATCTTCTGTCCCCGCATT  
AATGACTCTCAGGAAGGAGGATGTAATCAAGGCAAGTTTCTAATTCCAAGCTGCCTGTTTATGTTAACA  
GGACTTCTTTTTATTCTCAAGATGTAAGTGGTCCCTGGCACCTTAAGGAAATCCTGATAAAGGCAAAC  
TGTTGAGCCATTTGGTCCATAGGATCCCAGGACCAAGTCTGTGTTTTCATCGTTACTACCATGTGTTT  
CGTGAGGGAGAACTGGAAGGTGCCTGCAGGACTGTGAGTGTGATGTCAGAATTCTGCAAAGCTACTACGATC  
AAGGAACTGGTGTGATTCTTCAAAGGCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG202380 representing NM\_138775  
 Red=Cloning site Green=Tags(s)

MDSNHQSNYKLSKTEKKFLRKQIKAKHTLLRHEGIETVSYATQSLVVANGGLGNGVSRNQLLPVLEKCGL  
 VDALLMPPNPKPYSFARYRTTEESKRAYVTLNGKEVVDDLQKQITLYLNFVEKVQWKELRPQALPPGLMVV  
 EEIISSEEEKMLLESVDWTEDDTQNSQKSLKHRRVKHFGYEFHYENNNVDKDKPLSGGLPDICESFLEK  
 WLRKGYIKHKPDQMTINQYEPGQGI PAHIDTHSAFEDEIVSLSLGSEIVMDFKHPDGIAPVPLPRRSL  
 VMTGESRYLWTHGITCRKFDTVQASESLKSGIITSDVGLDLSKRGLRTSFTFRKVRQTPCNCSPYLVCD  
 SQRKETPPSPFESDKEASRLEQEVYHQVYEEIAGHFSSTRHTPWPHIVEFLKALPSGSIVADIGCGNGKY  
 LGINKELYMIGCDRSQNLVDICRERQFQAFVCDALAVPVRSGCDACISIAVIHFFATAERRVAALQEIV  
 RLLRPGGKALIYVWAMEQEYNKQKSKYL RGNRNSQGKKEEMNSDTSVQRSLEQMRDMGSRDSASSVPRI  
 NDSQEGGCNSRQVSNKLPVHVNRTSFYSDVLVPWHLKGNPDKGKPVPEFPGPIGSQDPSPVFHRYYHVF  
 REGELEGACRTVSDVRILQSYDQGNWCVILQKA

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_138775

**ORF Size:** 1992 bp

**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](mailto: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 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\\_138775.3](#)

**RefSeq Size:** 4085 bp

**RefSeq ORF:** 1995 bp

**Locus ID:** 91801

**UniProt ID:** [Q96BT7](#)

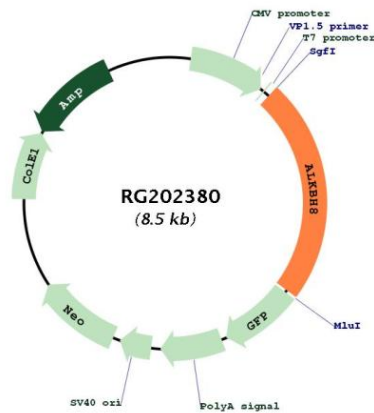
**Cytogenetics:** 11q22.3

**Domains:** RRM

**Protein Families:** Druggable Genome

**Gene Summary:**

Catalyzes the methylation of 5-carboxymethyl uridine to 5-methylcarboxymethyl uridine at the wobble position of the anticodon loop in tRNA via its methyltransferase domain (PubMed:20123966, PubMed:20308323). Catalyzes the last step in the formation of 5-methylcarboxymethyl uridine at the wobble position of the anticodon loop in target tRNA (PubMed:20123966, PubMed:20308323). Has a preference for tRNA(Arg) and tRNA(Glu), and does not bind tRNA(Lys)(PubMed:20308323). Binds tRNA and catalyzes the iron and alpha-ketoglutarate dependent hydroxylation of 5-methylcarboxymethyl uridine at the wobble position of the anticodon loop in tRNA via its dioxygenase domain, giving rise to 5-(S)-methoxycarbonylhydroxymethyluridine; has a preference for tRNA(Gly) (PubMed:21285950). Required for normal survival after DNA damage (PubMed:20308323). May inhibit apoptosis and promote cell survival and angiogenesis (PubMed:19293182).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for RG202380