

Product datasheet for **RN207832**

Alkbh3 (NM_001014180) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Alkbh3 (NM_001014180) Rat Untagged Clone
Tag: Tag Free
Symbol: Alkbh3
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN207832 representing NM_001014180
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGGACAAGAGACAGCGAGCCCGAGTGCAGGGAGCCTGGGCCACACCTACCAAGAGCCAGTCTGCTG
CTCGGCCAGCTACTCCTGCTAGAAGCCGTCCTTCCCAGACACCAGGGCCAAGCTGGAGGAGCAAGGAACA
GCAGCAATGTGACCGACGGTTTGTGTTCAAAGAACCAGCTGGTTGTACGTGCAGCCCCAGAGCCAGA
GTGATTGACAGGGAGGGTGTGTACGAAATCAGCCTGTCCCTACAGGTGTGTCTAGGGTGTGTTTATATC
CTGGCTTTGTGGACTTGAAGGAAGCTGACTGGATCTTGGAGCGGCTTTGTCAAGATGTCCCTGGAACA
GAGGATGGGCATCAGAGAGGATATAACTTATCCGCAACCAAGACTTACAGCATGGTATGGAGAGCTTCT
TACACTTACTCAAGAGTCACTATGGAACCAATCCTCACTGGCTTCTGTGCTGTGGACTCTGAAGAGCC
GCATTGAGGAGAACACTGGCCACACCTTCAACTCCTTGTGTGTAATTTTTACCGGGACGAGAAGGACAG
TGTGGACTGGCACAGCGATGATGAGCCATCCCTGGGGAGCTGCCCTGTCATTGCTTCACTCAGTTTTGGT
GCCACTCGGACTTTTGTGATGAGGAAGAAACCCACCTGAAGAGAATGGAGACTATACTTATGTGGAGA
GAGTGAAGATACCATTGGATCACGGGACCTTGCTAATCATGGAAGGAGCCACGCAAGCTGACTGGCAGCA
CCGAGTGCCCAAGGAATACCACTCCAGAGAACGGAGAGTAAACCTAACCTTTCGGACCGTTTATCCAGAC
CCAAGAGGAGCCCCGGTGATACTTCTGCAGAGCTGCCACTGAGG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-MluI
ACCN: NM_001014180
Insert Size: 888 bp



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none">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:	<u>NM_001014180.1, NP_001014202.1</u>
RefSeq Size:	1286 bp
RefSeq ORF:	888 bp
Locus ID:	362169
UniProt ID:	<u>Q5XIC8</u>
Cytogenetics:	3q31
Gene Summary:	Dioxygenase that mediates demethylation of DNA and RNA containing 1-methyladenosine (m1A). Repairs alkylated DNA containing 1-methyladenosine (m1A) and 3-methylcytosine (m3C) by oxidative demethylation. Has a strong preference for single-stranded DNA. Able to process alkylated m3C within double-stranded regions via its interaction with ASCC3, which promotes DNA unwinding to generate single-stranded substrate needed for ALKBH3. Also acts on RNA. Demethylates N(1)-methyladenosine (m1A) RNA, an epigenetic internal modification of messenger RNAs (mRNAs) highly enriched within 5'-untranslated regions (UTRs) and in the vicinity of start codons. Requires molecular oxygen, alpha-ketoglutarate and iron.[UniProtKB/Swiss-Prot Function]