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Product datasheet for RR207832

Alkbh3 (NM_001014180) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Alkbh3 (NM_001014180) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Alkbh3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR207832 representing NM_001014180 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGGGGACAAGAGACAGCGAGCCCGAGTGCAGGGAGCCTGGGCCACACCTACCAAGAGCCAGTCTGCTG CTCGGCCAGCTACTCCTGCTAGAAGCCGTCCTTCCCAGACACCAGGGCCAAGCTGGAGGAGCAAGGAACA GCAGCAATGTGACCGACGGTTTGTGTTCAAAGAACCGCAGCTGGTTGTACGTGCAGCCCCAGAGCCCAGA GTGATTGACAGGGAGGGTGTGTACGAAATCAGCCTGTCCCCTACAGGTGTGTCTAGGGTGTGTTTATATC CTGGCTTTGTGGACTTGAAGGAAGCTGACTGGATCTTGGAGCGGCTTTGTCAAGATGTCCCCTGGAAACA GAGGATGGGCATCAGAGAGGATATAACTTATCCGCAACCAAGACTTACAGCATGGTATGGAGAGCTTCCT TACACTTACTCAAGAGTCACTATGGAACCAAATCCTCACTGGCTTCCTGTGCTGTGGACTCTGAAGAGCC GCATTGAGGAGAACACTGGCCACACCTTCAACTCCTTGCTGTGTAATTTTTACCGGGACGAGAAGGACAG TGTGGACTGGCACAGCGATGATGAGCCATCCCTGGGGAGCTGCCCTGTCATTGCTTCACTCAGTTTTGGT GCCACTCGGACTTTTGAGATGAGGAAGAAACCCCCACCTGAAGAGAATGGAGACTATACTTATGTGGAGA GAGTGAAGATACCATTGGATCACGGGACCTTGCTAATCATGGAAGGAGCCACGCAAGCTGACTGGCAGCA CCGAGTGCCCAAGGAATACCACTCCAGAGAACGGAGAGTAAACCTAACCTTTCGGACCGTTTATCCAGAC CCAAGAGGAGCCCCCGGTGATACTTCTGCAGAGCTGCCACTGAGG ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

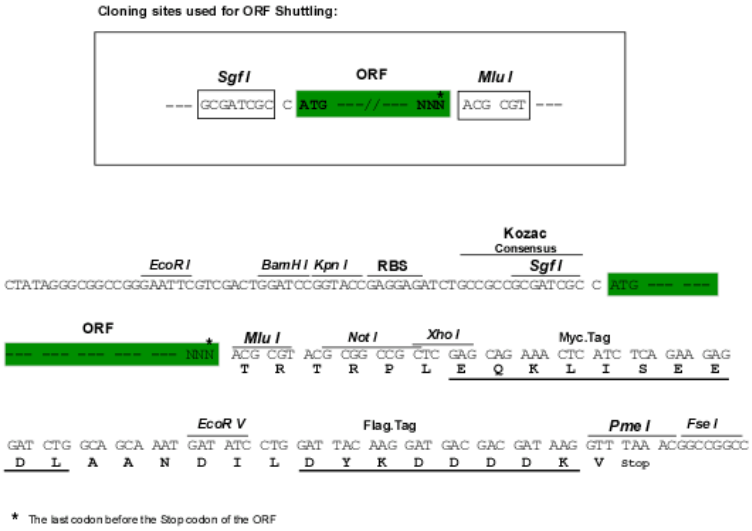
>RR207832 representing NM_001014180
Red=Cloning site Green=Tags(s)

MGDKRQRARVQGAWATPTKSQSAARPATPARSRPSQTPGPSWRSKEQQQCDRRFVFKEPQLVVRAAPEPR
VIDREGVYEISLSPTGVSRVCLYPGFVDLKEADWILERLCQDVPWKQRMGIREDITYPQPRLTAWYGELP
YTYSRVTMEPNPHWLPVLWTLKSRIEENTGHTFNSLLCNFYRDEKDSVDWHSDDEPSLGSCPVIASLSFG
ATRTFEMRKKPPPEENGDYTYVERVKIPLDHGTLLIMEGATQADWQHRVPKEYHSRERRVNLTFRTVYPD
PRGAPGDTSAELPLR

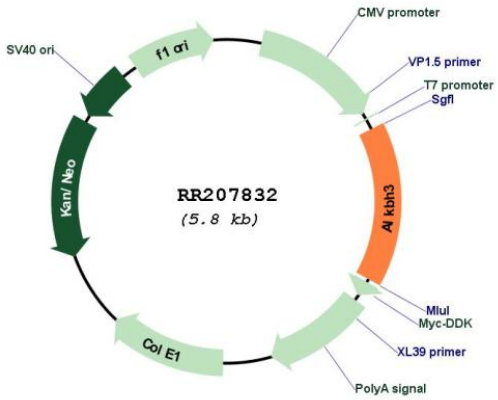
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001014180

ORF Size:	885 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.
RefSeq:	NM_001014180.1, NP_001014202.1
RefSeq Size:	1286 bp
RefSeq ORF:	888 bp
Locus ID:	362169
UniProt ID:	Q5XIC8
Cytogenetics:	3q31
MW:	34 kDa
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]