

Product datasheet for **RC202583**

ALKBH7 (NM_032306) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALKBH7 (NM_032306) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALKBH7
Synonyms:	ABH7; SPATA11; UNQ6002
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202583 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCGGGACTGGGCTGCTGGCGCTGCGGACGCTGCCAGGGCCCAGCTGGGTGCGAGGCTCGGGCCCTT
CCGTGCTGAGCCGCCTGCAGGACGCGGCCGTGGTGC GGCTGGCTTCTGAGCACGGCAGAGGAGGAGAC
GCTGAGCCGAGAAGTGGAGCCCGAGCTGCGCCCGCCGCTACGAATACGATCACTGGGACGCGGCCATC
CACGGCTCCGAGAGACAGAGAAGTCGCGCTGGTCAGAAGCCAGCCGGGCCATCTGCAGCGCTGCAGG
CGGCCGCCTTTGGCCCCGCCAGACCCTGCTCTCCTCCGTGCACGTGCTGGACCTGGAAGCCCGCGGCTA
CATCAAGCCCCACGTGGACAGCATCAAGTTCTGCGGGGCCACCATCGCCGGCCTGTCTCTCTGTCTCCC
AGCGTTATGCGGCTGGTGCACACCCAGGAGCCGGGGAGTGGCTGGAAGCTTGTGCTGGAGCCGGGCTCCC
TCTACATCCTTAGGGGCTCAGCCGTTATGACTTCTCCCATGAGATCCTTCGGGATGAAGAGTCTTCTT
TGGGGAACGCCGATTCCCCGGGGCCGGCGCATCTCCGTGATCTGCCGCTCCCTCCCTGAGGGCATGGGG
CCAGGGGAGTCTGGACAGCCGCCCCAGCCTGC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC202583 protein sequence
 Red=Cloning site Green=Tags(s)

MAGTGLLALRTLPGPSWVRGSGPSVLSRLQDAAVVRPGFLSTAEETLSRELEPELRRRRYEDHWDAAI
 HGFRETEKSRWSEASRAILQRVQAAAFGPGQTLSSVHVLDEARGYIKPHVDSIKFCGATIAGLSLLSP
 SVMRLVHTQEPGEWLELLLEPGSLYILRGSARYDF SHEILRDEESFFGERRIPRRRISVICRSLPEGMG
 PGESGQPPAC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6143_a09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_032306

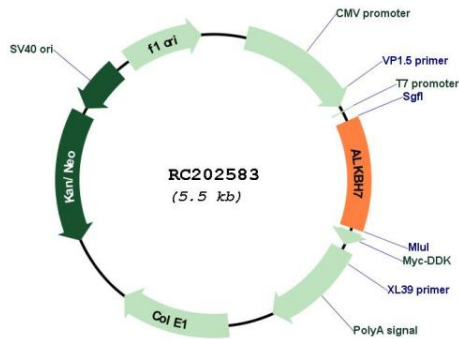
ORF Size: 663 bp

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](#)

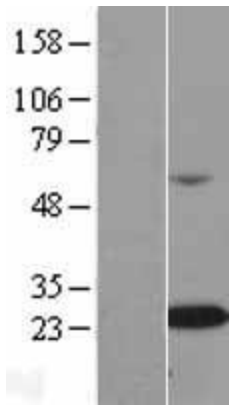
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

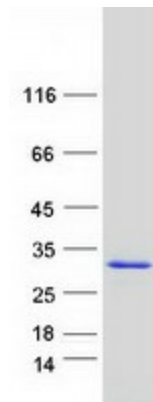
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_032306.4
RefSeq Size:	1331 bp
RefSeq ORF:	666 bp
Locus ID:	84266
UniProt ID:	Q9BT30
Cytogenetics:	19p13.3
MW:	24.5 kDa
Gene Summary:	May function as protein hydroxylase; can catalyze auto-hydroxylation at Leu-110 (in vitro), but this activity may be due to the absence of the true substrate (PubMed:25122757). Required to induce programmed necrosis in response to DNA damage caused by cytotoxic alkylating agents. Acts by triggering the collapse of mitochondrial membrane potential and loss of mitochondrial function that leads to energy depletion and cell death (PubMed:23666923). ALKBH7-mediated necrosis is probably required to prevent the accumulation of cells with DNA damage (PubMed:23666923). Does not display DNA demethylase activity (PubMed:23666923). Involved in fatty acid metabolism (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for RC202583



Western blot validation of overexpression lysate (Cat# [LY403154]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202583 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ALKBH7 protein (Cat# [TP302583]). The protein was produced from HEK293T cells transfected with ALKBH7 cDNA clone (Cat# RC202583) using MegaTran 2.0 (Cat# [TT210002]).