

Product datasheet for RC209647

HMBOX1 (NM_024567) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HMBOX1 (NM_024567) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HMBOX1
Synonyms:	HNF1LA; HOT1; PBHNF; TAH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209647 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTTAGTTCCTTTCCAGTGGTTTTGCTGAAACCATGTCTCATTATACAGATGAACCCAGATTTACCA
TAGAGCAGATAGATCTGCTTCAGCGACTTCGGCGTACTGGAATGACTAAACATGAAATTCATGCCTT
GGAAACTTTGGACCGTCTTGATCAAGAGCATAGTGACAAGTTTGAAGAAGGTCCAGCTATGGAGGAAGT
TCATATGGGAATAGTACTAACAATGTCCCAGCATCTTCCTCTACAGCTACAGCTTCCACACAGACGCAGC
ATTCGGGAATGTCCCGTCACCTAGCAACAGTTATGATACTTCCCACAGCCTTGCACTACCAATCAAAA
TGGGAGGGAGAATAATGAGCGATTATCTACATCCAATGGAAGATGTCACCAACTCGCTACCATGCAAAC
AGCATGGGTCCAGAGTCCATACAGTTTTGAAAGCCTCAGAAGAGGACCTAGATGTAGATGATAAAGTGGAA
AATTAATGAGGAGGGACAGCAGTGTGATAAAGAGGAAATCAAAGCCTTTCTTGCCAATCGGAGGATTTT
CCAAGCAGTTGTTGCACAGGTAACAGGTATCAGTCAGAGCCGGATCTCTCATTGGCTGTTGCAGCAGGGA
TCAGACCTGAGTGAACAGAAGAAAAGAGCATTTTACCGATGGTATCAACTTGAGAAGACAAACCTGGCG
CTACACTAAGTATGAGACCAGCCCCATTCCAATAGAGGACCTGAATGGAGACAAACGCCTCCCCCAGT
CTCTGCCACATCTGGTACTTTCCGACTGCGACGAGGGAGTCGATTTACCTGGAGAAAGGAGTGCCTGGCT
GTTATGGAAAGTTACTTCAATGAGAATCAATACCCAGATGAAGCAAAGAGGGAAGAAATGCAAACGCTT
GCAATGCAGTTATACAGAAGCCAGGCAAAAAGCTGTGAGATCTGGAAGAGTTACCTCCCTGAAAGTATA
TAATTGGTTTGCTAACAGAAGGAAGGAGATCAAGAGGAGAGCCAATATTGAAGCAGCAATCCTGGAGAGT
CATGGGATAGATGTGCAGAGTCCAGGAGGCCACTCAAACAGTGTGATGTCGACGGGAATGACTACTCTG
AGCAGGATGACAGTACGAGCCATAGTGACCACCAAGACCCCATCTCATTAGCTGTGGAAATGGCAGCAGT
CAACCACACTATCTTGGCATTGGCCGACAAGGAGCCAACGAAATCAAGACAGAGGCCCTGGATGATGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC209647 protein sequence
Red=Cloning site Green=Tags(s)

MLSSFPVVLLETMSHYTDEPRFTIEQIDLLQLRRTGMTKHEILHALETLDRLDQEHSDFGRRSSYGGS
 SYGNSTNNVPASSSTATASTQTQHSGMSPSPNSYDTSQPCTTNQNGRENNERLSTNGKMSPTRYHAN
 SMGORSYSFEASEEDLDVDDKVEELMRDSSVIKKEEIKAFANRRISQAVVAQVTGISQSRISHWLLQQG
 SDLSEQKKRAFWRWYQLEKTNPGATLSMRPAPIPIEDPEWRQTPPPVSATSGTFRLRRGSRFTWRKECLA
 VMESYFNENQYPDEAKREEIANACNAVIQKPGKLLSDLERVTSLKVYNWFANRRKEIKRRANIEAAILES
 HGDIVQSPGGHSNSDDVDGNDYSEQDDSTSHSDHQDPI SLAVEMA AVNHTILALARQGANEIKTEALDDD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6556_c10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_024567

ORF Size: 1260 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_024567.4](#)

RefSeq Size: 3233 bp

RefSeq ORF: 1263 bp

Locus ID: 79618

UniProt ID: [Q6NT76](#)

Cytogenetics: 8p21.1-p12

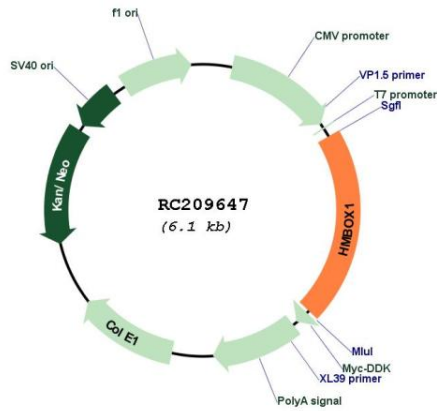
Domains: homeobox, HNF-1_N

Protein Families: Transcription Factors

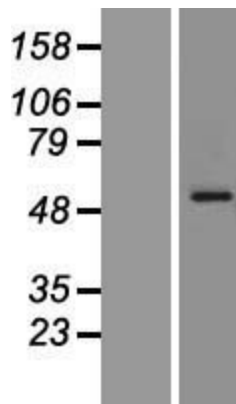
MW: 47.3 kDa

Gene Summary: Binds directly to 5'-TTAGGG-3' repeats in telomeric DNA (PubMed:23813958, PubMed:23685356). Associates with the telomerase complex at sites of active telomere processing and positively regulates telomere elongation (PubMed:23685356). Important for TERT binding to chromatin, indicating a role in recruitment of the telomerase complex to telomeres (By similarity). Also plays a role in the alternative lengthening of telomeres (ALT) pathway in telomerase-negative cells where it promotes formation and/or maintenance of ALT-associated promyelocytic leukemia bodies (APBs) (PubMed:23813958). Enhances formation of telomere C-circles in ALT cells, suggesting a possible role in telomere recombination (PubMed:23813958). Might also be involved in the DNA damage response at telomeres (PubMed:23813958).[UniProtKB/Swiss-Prot Function]

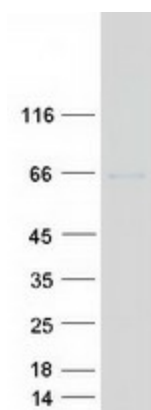
Product images:



Circular map for RC209647



Western blot validation of overexpression lysate (Cat# [LY427683]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC227861] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HMBOX1 protein (Cat# [TP309647]). The protein was produced from HEK293T cells transfected with HMBOX1 cDNA clone (Cat# RC209647) using MegaTran 2.0 (Cat# [TT210002]).