

## Product datasheet for **RG209647**

### HMBOX1 (NM\_024567) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HMBOX1 (NM_024567) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HMBOX1
Synonyms:	HNF1LA; HOT1; PBHNF; TAH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209647 representing NM_024567 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTTAGTTCCTTTCCAGTGGTTTTGCTGAAACCATGTCTCATTATACAGATGAACCCAGATTTACCA  
TAGAGCAGATAGATCTGCTTCAGCGACTTCGGCGTACTGGAATGACTAAACATGAAATTCATGCCTT  
GGAAACTTTGGACCGTCTTGATCAAGAGCATAGTGACAAGTTTGAAGAAGGTCCAGCTATGGAGGAAGT  
TCATATGGGAATAGTACTAACAATGTCCCAGCATCTTCTCTACAGCTACAGCTTCCACACAGACGCAGC  
ATTCGGGAATGTCCCGTCACCTAGCAACAGTTATGATACTTCCCACAGCCTTGCACTACCAATCAAAA  
TGGGAGGGAGAATAATGAGCGATTATCTACATCCAATGGAAAGATGTACCAACTCGCTACCATGCAAAC  
AGCATGGGTCCAGAGGTCATACAGTTTTGAAGCCTCAGAAGAGGACCTAGATGTAGATGATAAAGTGGAA  
AATTAATGAGGAGGGACAGCAGTGTGATAAAAGAGGAAATCAAAGCCTTTCTTGCCAATCGGAGGATTT  
CCAAGCAGTTGTTGCACAGGTAACAGGTATCAGTCAGAGCCGGATCTCTCATTGGCTGTTGCAGCAGGGA  
TCAGACCTGAGTGAACAGAAGAAAAGAGCATTTTACCGATGGTATCAACTTGAGAAGACAAACCTGGCG  
CTACACTAAGTATGAGACCAGCCCCATTCCAATAGAGGACCTGAATGGAGACAAACGCCTCCCCCAGT  
CTCTGCCACATCTGGTACTTTCCGACTGCGACGAGGGAGTCGATTTACCTGGAGAAAGGAGTGCCTGGCT  
GTTATGGAAAGTTACTTCAATGAGAATCAATACCCAGATGAAGCAAAGAGGGAAGAAATGCAAACGCTT  
GCAATGCAGTTATACAGAAGCCAGGCAAAAAGCTGTGAGATCTGGAAAGAGTTACCTCCCTGAAAGTATA  
TAATTGTTTTGCTAACAGAAGGAAGGAGATCAAGAGGAGAGCCAATATTGAAGCAGCAATCCTGGAGAGT  
CATGGGATAGATGTGCAGAGTCCAGGAGGCCACTCAAACAGTGATGATGTCGACGGGAATGACTACTCTG  
AGCAGGATGACAGTACGAGCCATAGTGACCACCAAGACCCCATCTCATTAGCTGTGGAAATGGCAGCAGT  
CAACCACACTATCTTGGCATTGGCCGACAAGGAGCCAACGAAATCAAGACAGAGGCCCTGGATGATGAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG209647 representing NM\_024567  
 Red=Cloning site Green=Tags(s)

MLSSFPVVLLETMSHYTDEPRFTIEQIDLLQLRRTGMTKHEILHALETLDRLDQEHSDFGRSSYGGSSYGNSTNNVPASSSTATASTQTQHSGMSPSPNSYDTSPOQCTTNQNGRENNERLSTSNQKMSPTRYHANSMGQRSYSFEASEEDLDVDDKVEELMRDSSVIKKEIKAFLANRRISQAVVAQVTGISQSRISHWLLQQGSDLSEQKKRAFYRWYQLEKTNPGATLSMRPAPIPIEDPEWRQTPPPVSATSGTFRLRRGSRFTWRKECLAVMESYFNENQYPDEAKREEIANACNAVIQKPGKKLSDLERVTSLKVYNWFANRRKEIKRRANIEAAILES  
 HGIDVQSPGGHSNDDVDGNDYSEQDDSTSHSDHQDPISLAVEMA AVNHTILALARQGANEIKTEALDDD

TRTRPLE – GFP Tag – V

**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:** 2427 bp

**RefSeq ORF:** 1263 bp

**Locus ID:** 79618

**UniProt ID:** [Q6NT76](#)

**Cytogenetics:** 8p21.1-p12

**Domains:** homeobox, HNF-1\_N

**Protein Families:** Transcription Factors

**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 RG209647