OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR211593

Helb (NM_080446) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Helb (NM_080446) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Helb
Synonyms:	AI447783; D10Ertd664e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211593 representing NM_080446 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGCTAGGCAGGATCGTCTGCGCGAGCTCCTGGGCCCTCTGCACCCGTACAAGAGCGACGACGAGGAGG AGGATTGTGCGCAGGAGGAGGAGGGGGAGCAGGAGGAGGAGTTTGTGGATGCCGAGGAACTCTGCAGCGG GGGCATCAAGGCGGGCAGCCTCCCTGGGCGCGCGCGAGTGTCTATCCCTGATGAGTATACTAAAGAGAAA TGTACCGTGTACGGACGTTTCCCACTCAAAGGTCCGTGGTGGCGCGTGAAGGTCCAGGTCCTGAAACCCC AGCGATCCAGGAGCTATCAAGTTCAAGGCTTTCCGGCATACTTTCTACAGGTTGATATGTCGCCACCAGA TCAAAAACAAATCTGTTCGCTTTTTCTTAAAGAATGCAACTTAGCCTCTGAGCGCATACAGGAATTTTTA AAATGGGTAGAAAAAGTGTCAAGCTTTGAAAATCTACACTTTGAAAATCTTTGGGAAACATTAAGGCTTT TCTACAGAGAAACCGAAAAGAAAGATAAAAAGCTGTCTACACCAAGGGAGCAGCAGGGTGAGGAGATGAG AGTGGAAAAATCATTCGCATTTATAAGTGCAATGGTAGCTCTGCAATTCCCCAAAGTCATGGAATTCCTT CCATCGCTTTTCCCTCGACACTTCAAAAGGCTCATCAGCTCGAGTTCTGATTGGGTGCTGGGATGCATAG AAGATGTTCTGGGTACACAGCCGTGGAAGCTGGGCTTCAGGAGGATAACCTACAGAGAAATGAAACTAGT GCGCTGTGAGGCCAGCTGGACAGCGTTCAGTCAGTGCCCCTCGCTGCTCCAGCTGATGACGCCCCTGCAG AAGAATGCATTGGTCATATATTCTAAGCTGAGGCAGACATGCAGAGAAGACGGACACACGTACATTGAAG TAAAAGACTTGACCTCGGGCTTGTCGGAGCATATGTCATTCGAGGAAGCGTGTCAGTCTCTGGCGTTTCT GAAGGACATTGACGTGGTCATTTATGAGAAGGACTATGTCTTTCTTTCTGAACTGTACGAGGCCGAGCAA GACATCGCCTCCTCCATCTGCGAGCTGATGAGCAGACCTCCGTGGCACTTAAAAGTGGACGTGAAGAACG TCCTGGCGTCAATTAGAGGCGCAAAGCCCAACGATCCAGGAAGTGCTGAGGCAGTGGAAGGGAGCAAGCC GGAGGAGGTGGGGTCAGAGCAGGGTGACAGTGTTTTAGACGCCCAAGATGGCGATGACCATGTTAGAAGC AATGGCGAACACGTCGCAAATGCAGAAATAAACGACGTCCCACTGGATCAAGATCAGGTGGTCGCCCTGG AGACGATCTGCGCCAACGCGGTGACTGTCCTCAGTGGGAAAGGCGGCTGTGGGAAGACCACCATTGTTAG CCGTCTTTTTAAGCACATGGAACATCTGGAAGAAACGGAAGTGCAGCAAGCCTGCGAGGATTTTGAACAA

View online »

GACCAGGAAGCCTCAGAAGAGTGGCTTGACTGTCCTAAGCAGAGCCCAGCCGGTGTGGACAAGGCTGTAG
AAGTCTTGCTCACCGCACCTACAGGGAAGGCTGCTGGCTTATTGAGGCAGAGGACCGATCTTCCGGCTTA
CACGCTGTGCCAGGTCAATTACAGCTTCTATATGTGGAAAACGAAAAATGAGGTGGACAAGCCGTGGAAA
TTCTCCACGGTTCGAGTTCTGGTTGTGGACGAAGGGAGTTTGGTGTCTGTAGGGATCTTCAAGTCAGTGT
TACAGTTGCTGTGCAAACACTCCAAGCTGTCCAAGCTCATCATCCTTGGTGATGTTAGACAGTTGCCCAG
TATTGAACCTGGTAACATGCTGCAGGATGTCTTTGAGACTCTTAAGTCAAGACAGTGTGCCATCGAACTA
AAGACGAACCACAGGACAGAGTCTCAGCTGATTGTGGACAATGCTACAAGAATCTCCAGACGTCAGTTTC
CAAAATTTGATGCTGAACTAAATATCTGTGGTAATCCTACATTACCTCTCTCCATTCAAGATAAGACATT
TATCTTTGTGAGACTCCCTGAAGAAGACAGCAGATCTCAGTCGTCTAAAGGTGAACACCGATCTAATTTA
TATACTGCAGTTAAAACTTTGCTTCAAGGAAAGGACTTCTGCTCTTTTGAAAGTTCAAAAACATCGCAAT
TTATTGCATTTAGAAGGCAAGACTGTGACCTCATCAATGACTGCTGCTGCAAGCACTACACAGGCCACCT
CATCAAAGACCATGAGAAGAAACTCATCTTTGCCGTCGGTGATAAGATCTGCTGTACCCGGAATGCATAC
CTCTCAGATTTACTCCCCGACAAAGACCAGGAAGCCGAGGGGAAAGGCTATGGAGACGCCCCTGACGACG
ATGCTAAAATCAAACAGGATTTCGAAAGCAGCACCCGCCTGTGCAACGGGGAAATATTTTTCATAACACG
GGATGTAACTGACGTAACTTTCAAAAGAAAAAGACTTCTGACCATTAATAACGAGGCCGGTTTGGAAGTG
ACTGTGGACTTTAGCAAACTAATGGCAAACTGTCAGATCAAGCATGCCTGGGCAAGGACCATTCATACTT
TTCAGGGGTCCGAGGAGAACACAGTCGTCTACGTCGTGGGGAAGGCAGGCCGCCAGCACTGGCAACATGT
TTACACGGCAGTGACCCGGGGCCGCTCCAGAGTGTACATCATCGCGCAGGAGTCTGAACTCAGGAGTGCC
ACCCGGAAGCGCGGTTTCCCCAGGCAGACGCGTTTGAAACACTTCTTGCAGAAGAAGCTCTCTGGCAGCT
GCGCACCCTCAACAGGTTTCGCATCCCAGCCTTCGAGCCCTCGAGTCGGAGGAAGACCTGACACCCAGCC
TCCAGCGTCACACCTCTGTAGAACCCCAGACAACAAAGCCACTGCAGACAGCGCCAGAGGCGACGAAAGA
TGGCTGTCAGCTTCTGTTAACGATGACGTGGATACGGATGAGGAGTCAGCACAGCTCAGAGGGTCCAAAA
GAATCGGTGACGGCTTCCCGTTTGATGAAGAAAGCCCCAGTAAATTCCGTATGGTTGAAGCGCCATCTCC
ACAGGTGTCCTCTGTGTTTCAGAATATGAGGTTGAATACTCTCACTCCCAGACAGCTTTTTAAACCCACC
GACAATCAAGACACAGGTACGGCAGGTGTGGCGGACGACGCCAACGATCCCAGCAATCAGGAGATGGAAA
TG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR211593 representing NM_080446
Red=Cloning site Green=Tags(s)

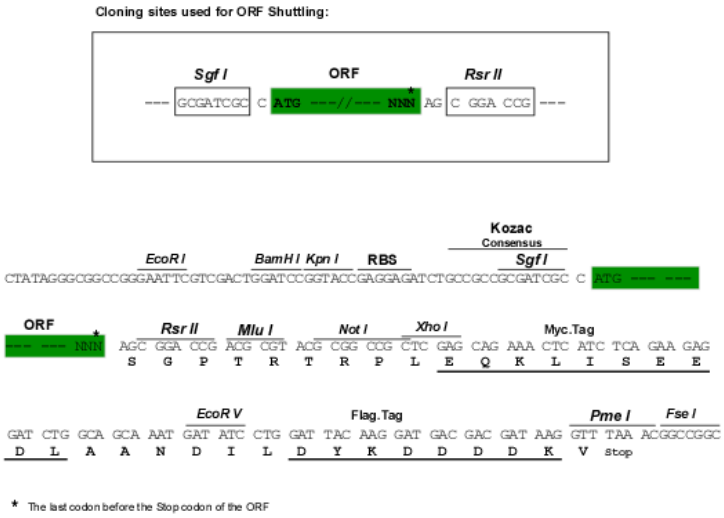
MARQDRLRELLGPLHPYKSDDEEEDCAQEEEGEQEEEFVDAEELCSGGIKAGSLPGRARVSIPDEYTKEK
CTVYGRFPLKGPWWRVKVQVLKPQRSRSYQVQGFPAYFLQVDMSPPDQKQICSLFLKECNLASERIQEFL
KWVEKVSSFENLHFENLWETLRLFYRETEKKDKKLSTPREQQGEEMRVEKSFAFISAMVALQFPKVMEFL
PSLFPRHFKRLISSSSDWVLGCIEDVLGTQPWKLGFRRITYREMKLVRCEASWTAFSQCPSLLQLMTPLQ
KNALVIYSKLRQTCREDGHTYIEVKDLTSGLSEHMSFEEACQSLAFLKDIDVVIYEKDYVFLSELYEAEQ
DIASSICELMSRPPWHLKVDVKNVLASIRGAKPNDPGSAEAVEGSKPEEVGSEQGDSVLDAQDGDDHVRS
NGEHVANAEINDVPLDQDQVVALETICANAVTVLSGKGGCGKTTIVSRLFKHMEHLEETEVQQACEDFEQ
DQEASEEWLDCPKQSPAGVDKAVEVLLTAPTGKAAGLLRQRTDLPAYTLCQVNYSFYMWKTKNEVDKPWK
FSTVRVLVVDEGSLVSVGIFKSVLQLLCKHSKLSKLIILGDVRQLPSIEPGNMLQDVFETLKSRQCAIEL
KTNHRTESQLIVDNATRISRRQFPKFDAELNICGNPTLPLSIQDKTFIFVRLPEEDSRSQSSKGEHRSNL
YTAVKTLLQGKDFCSFESSKTSQFIAFRRQDCDLINDCCCKHYTGHLIKDHEKKLIFAVGDKICCTRNAY
LSDLLPDKDQEAEGKGYGDAPDDDAKIKQDFESSTRLCNGEIFFITRDVTDVTFKRKRLLTINNEAGLEV
TVDFSKLMANCQIKHAWARTIHTFQGSEENTVVYVVGKAGRQHWQHVYTAVTRGRSRVYIIAQESELRSA
TRKRGFPRQTRLKHFLQKKLSGSCAPSTGFASQPSSPRVGGRPDTQPPASHLCRTPDNKATADSARGDER
WLSASVNDDVDTDEESAQLRGSKRIGDGFPFDEESPSKFRMVEAPSPQVSSVFQNMRLNTLTPRQLFKPT
DNQDTGTAGVADDANDPSNQEMEM

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9097_f01.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_080446

ORF Size: 3222 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_080446.2, NP_536694.2

RefSeq Size: 4540 bp

RefSeq ORF: 3225 bp

Locus ID: 117599

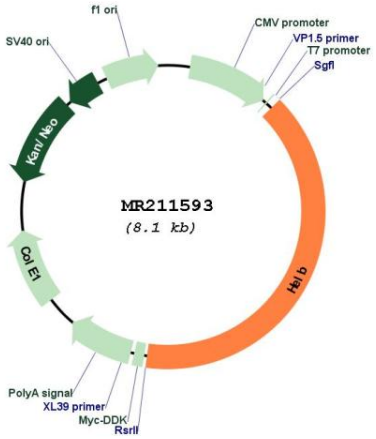
UniProt ID: Q6NVF4

Cytogenetics: 10 67.94 cM

MW: 121.5 kDa

Gene Summary: 5'-3' DNA helicase involved in DNA damage response by acting as an inhibitor of DNA end resection (PubMed:26774285). Recruitment to single-stranded DNA (ssDNA) following DNA damage leads to inhibit the nucleases catalyzing resection, such as EXO1, BLM and DNA2, possibly via the 5'-3' ssDNA translocase activity of HELB (PubMed:26774285). As cells approach S phase, DNA end resection is promoted by the nuclear export of HELB following phosphorylation (PubMed:26774285). Acts independently of TP53BP1 (PubMed:26774285). Unwinds duplex DNA with 5'-3' polarity. Has single-strand DNA-dependent ATPase and DNA helicase activities. Prefers ATP and dATP as substrates. During S phase, may facilitate cellular recovery from replication stress (PubMed:11557815, PubMed:7596831, PubMed:7794903). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211593