

## Product datasheet for **RC200465**

### HEXB (NM\_000521) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HEXB (NM_000521) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HEXB
Synonyms:	ENC-1AS; HEL-248; HEL-S-111
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC200465 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGCTGTGCGGGCTGGGGCTGCCCCGGCCGCCCATGTGCTGCGCTGCTGTTGGCGACACTGCTGG  
 CGGCGATGTTGGCGCTGCTGACTCAGGTGGCGCTGGTGGTGCAGGTGGCGGAGGCGGCTCGGGCCCCGAG  
 CGTCTCGGCCAAGCCGGGCGCGCTGTGGCCCTGCCGCTCTCGGTGAAGATGACCCCGAACCTGCTG  
 CATCTCGCCCCGAGAATTCTACATCAGCCACAGCCCAATTCACGGCGGGCCCTCCTGCACCTGCTG  
 TGGAGGAAGCGTTTCGACGATATCATGGCTATATTTTTGGTTTCTACAAGTGGCATCATGAACCTGCTGA  
 ATTCCAGGCTAAAACCCAGGTTCCAGCACTTCTGTCTCAATCACCTTCAGTCAGAGTGTGATGCTTTT  
 CCCAACATATCTCAGATGAGTCTTATACTTTACTTGTGAAAGAACCAGTGGCTGCTTAAAGGCCAACA  
 GAGTTTGGGGAGCATTACGAGGTTTAGAGACCTTAGCCAGTTAGTTTATCAAGATCTTATGGAACCTT  
 CACCATCAATGAATCCACCATTATTGATTCTCCAAGTTTTCTCACAGAGGAATTTGATTGATACATCC  
 AGACATTATCTGCCAGTTAAGATTATTCTTAAACTCTGGATGCCATGGCTTTAATAAGTTAATGTTT  
 TCACTGGCACATAGTTGATGACCAGTCTTTCCCATATCAGAGCATCACTTTTCTGAGTTAAGCAATA  
 AGGAAGCTATTCTTTGTCTCATGTTTATACACCAATGATGTCGGTATGGTGAATATGCCAGATTA  
 CGAGGAATTCGAGTCTGCCAGAATTTGATACCCCTGGGCATACACTATCTTGGGAAAAGGTCAGAAA  
 ACCTCCTGACTCCATGTTACAGTAGACAAAACAAGTTGGACTCTTTTGGACCTATAAACCCCTACTCTGA  
 TACAACATACAGTTCCTTACTACATTTTTCAAGAAATAGTGAGGTGTTTCCAGATCAATTCATTCAT  
 TTGGGAGGAGATGAAGTGAATTTAAATGTTGGGAATCAAATCCAAAAATCAAGATTTTCATGAGGCAAA  
 AAGGCTTTGGCACAGATTTAAGAACTAGAATCTTTTACATTCAAAGGTTTTGGATATTATTGCAAC  
 CATAAACAAAGGATCCATTGTCTGGCAGGAGTTTTTGTGATAAAGCAAAGCTTGGCGCCGGCACAA  
 GTTGAAGTATGGAAGACAGCGCATATCCTGAGGAACTCAGTAGAGTCACAGCATCTGGCTTCCCTGTAA  
 TCCTTTCTGCTCCTTGGTACTTAGATTTGATTAGCTATGGACAAGATTGGAGAAATACTATAAAGTGG  
 ACCTCTTGATTTTGGCGTACTCAGAAACAGAAACAACCTTTTATTGGTGGAGAAGCTTGTCTATGGGGA  
 GAATATGTGGATGCAACTAACCTCACTCCAAGATTATGGCCTCGGGCAAGTGTGTTGGTGGAGACTCT  
 GGAGTTCAAAGATGTCAGAGATATGGATGACGCCTATGACAGACTGACAAGGCACCGCTGCAGGATGGT  
 CGAACGTGAATAGCTGCACAACCTCTTATGCTGGATATTGTAACCATGAGAACATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC200465 protein sequence  
 Red=Cloning site Green=Tags(s)

MELCGLGLPRPPMLLALLLATLLAAMLALLTQVALVVQVAEARAPSVSAKPGPALWPLPLSVKMPNLL  
 HLAPEFYISHSPNSTAGPSCITLLEAFRRYHGYIFGFYKWHHEPAEFQAKTQVQQLVSIITLQSEDAF  
 PNISSESYTLLVKEPVAVLKANRVWALRGLETFSQLVYQDSYGTFTINESTIIDSPRFSHRGILIDTS  
 RHVLPVKIILKTLDAFNFVNLHWHIVDDQSFYQSIIFPELSNKGYSLSHVYTPNDVRMVEIYARL  
 RGIRVLPFDTPGHTLSWKGQKDLLTPCYSRQNKLDSFGPINPTLNTTYSFLTTFEISEVFPDQFIH  
 LGGDEVEFKWESNPKIQDFMRQKGFDTFKKLESFYIQKVLDIATINKGSIVWQEVFDDKAKLAPGTI  
 VEVWKSAYPEELSRVTASGFPVILSAPWYLDLISYQDWRKYKVEPLDFGGTQKQKQLFIGGEACLWG  
 EYVDATNLTPRLWPRASAVGERLWSSKDVDRMDDAYDRLTRHRCRMVERGIAAQPLYAGYCNHENM

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6232\\_b01.zip](https://cdn.origene.com/chromatograms/mk6232_b01.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_000521

**ORF Size:** 1668 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_000521.3](#)

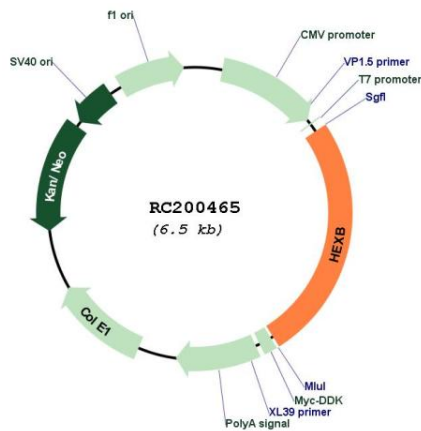
**RefSeq Size:** 1919 bp

**RefSeq ORF:** 1671 bp

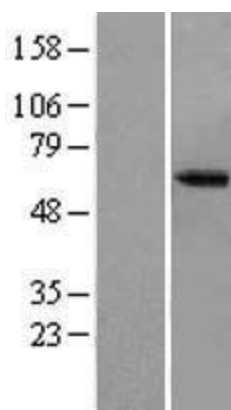
**Locus ID:** 3074

<b>UniProt ID:</b>	<u>P07686</u>
<b>Cytogenetics:</b>	5q13.3
<b>Domains:</b>	Glyco_hydro_20
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Amino sugar and nucleotide sugar metabolism, Glycosaminoglycan degradation, Glycosphingolipid biosynthesis - ganglio series, Glycosphingolipid biosynthesis - globo series, Lysosome, Metabolic pathways, Other glycan degradation
<b>MW:</b>	63.1 kDa
<b>Gene Summary:</b>	Hexosaminidase B is the beta subunit of the lysosomal enzyme beta-hexosaminidase that, together with the cofactor GM2 activator protein, catalyzes the degradation of the ganglioside GM2, and other molecules containing terminal N-acetyl hexosamines. Beta-hexosaminidase is composed of two subunits, alpha and beta, which are encoded by separate genes. Both beta-hexosaminidase alpha and beta subunits are members of family 20 of glycosyl hydrolases. Mutations in the alpha or beta subunit genes lead to an accumulation of GM2 ganglioside in neurons and neurodegenerative disorders termed the GM2 gangliosidoses. Beta subunit gene mutations lead to Sandhoff disease (GM2-gangliosidosis type II). Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2014]

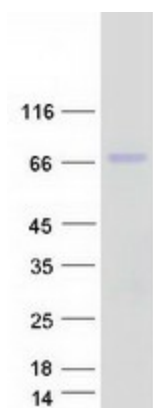
### Product images:



Circular map for RC200465



Western blot validation of overexpression lysate (Cat# [LY424662]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200465 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HEXB protein (Cat# [TP300465]). The protein was produced from HEK293T cells transfected with HEXB cDNA clone (Cat# RC200465) using MegaTran 2.0 (Cat# [TT210002]).