

## Product datasheet for **RC200468**

### GSK3 beta (GSK3B) (NM\_002093) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GSK3 beta (GSK3B) (NM_002093) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GSK3 beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200468 representing NM_002093 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCAGGGCGGCCAGAACCACCTCCTTTGCGGAGAGCTGCAAGCCGGTGCAGCAGCCTTCAGCTTTTG  
GCAGCATGAAAGTTAGCAGAGACAAGGACGGCAGCAAGGTGACAACAGTGGTGCAACTCCTGGGCAGGG  
TCCAGACAGGCCACAAGAAGTCAGCTATACAGACACTAAAGTATTGGAAATGGATCATTGGTGTGGTA  
TATCAAGCCAACTTTGTGATTCAGGAGAACTGGTCGCCATCAAGAAAGTATTGCAGGACAAGAGATTTA  
AGAATCGAGAGCTCCAGATCATGAGAAAGCTAGATCACTGTAACATAGTCCGATTGCGTTATTTCTTCTA  
CTCCAGTGGTGAGAAGAAGATGAGGTCTATCTTAATCTGGTGCTGGACTATGTTCCGAAACAGTATAC  
AGAGTTGCCAGACACTATAGTCGAGCCAAACAGACGCTCCCTGTGATTTATGCAAGTTGTATATGTATC  
AGCTGTTCCGAAGTTTAGCCTATATCCATTCTTTGGAATCTGCCATCGGGATATTAACCCGAGAACCT  
CTTGTTGGATCCTGATACTGCTGTATTAATAACTCTGTGACTTTGGAAGTGCAAAGCAGCTGGTCCGAGGA  
GAACCCAATGTTTCGTATATCTGTTCTCGTACTATAGGGCACCAGAGTTGATCTTTGGAGCCACTGATT  
ATACCTCTAGTATAGATGTATGGTCTGCTGGCTGTGTGGCTGAGCTGTTACTAGGACAACCAATATT  
TCCAGGGGATAGTGGTGTGGATCAGTTGGTAGAAATAATCAAGGTCTGGAACTCCAACAAGGGAGCAA  
ATCAGAGAAATGAACCCAACTACACAGAAATTTAAATTCCTCAAATTAAGGCACATCCTTGGACTAAGG  
ATTCGTCAGGAACAGGACATTTACCTCAGGAGTGCAGGCTTCCGACCCGAATCCACCGGAGGCAAT  
TGCACTGTGTAGCCGTCTGCTGGAGTATACACCAACTGCCCGACTAACCCACTGGAAGCTTGTGCACAT  
TCATTTTTTGTGAATTACGGGACCCAAATGTCAAACCTACCAAATGGGCGAGACACACCTGCACTTTCA  
ACTTCACCACTCAAGAACTGTCAAGTAATCCACCTCTGGTACCATCCTTATTCTCCTCATGCTCGGAT  
TCAAGCAGCTGCTTCAACCCCACAAAATGCCACAGCAGCGTCAGATGCTAATACTGGAGACCGTGGACAG  
ACCAATAATGCTGCTTCTGCATCAGCTTCCAACCTCCACC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC200468 representing NM\_002093  
Red=Cloning site Green=Tags(s)

MSGRPRTTSFAESCKPVQQPSAFGSMKVS RDKDGSKVTTVVATPGQGPDRPQEVSYTDTKVI GNGSFGVV  
 YQAKLCDSGELVAIKKVLQDKRFKNRELQIMRKL DHCNIVRLRYFFYSSGEEKKDEVYLNLVLDYVPETVY  
 RVARHYSRAKQTL PVIYVKLYMYQLFRSLAYIHSFGICH RDIKPQNLLLD PDTAVLKL CDFGSAKQLVRG  
 EPNVSYICSRYYRAPELIFGATDY TSSIDVWSAGCVLA ELLLGQPIFGDSGVDQLVEI IKVLGTP TREQ  
 IREMNPNYTEFKFPQIK AHPWTKDSSGTGHFTSGVRVFRP RTPPEAIALCSRLLEYTP TARLTPLEACAH  
 SFFDEL RDPNVKLPNGRDT PALFNFTTQELSSNPPLATILIPPHARIQA AASTPTNATAASDANTGDRGQ  
 TNN AASASANST

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3090\\_f05.zip](https://cdn.origene.com/chromatograms/mg3090_f05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002093

**ORF Size:** 1299 bp

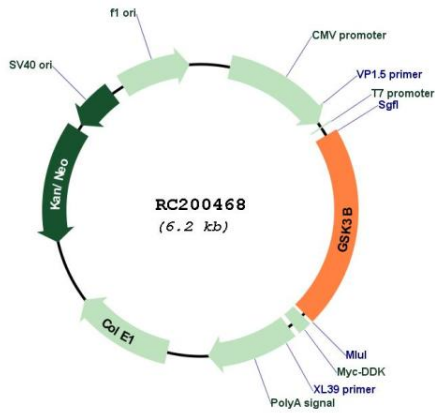
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

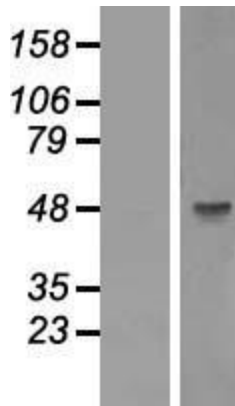
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_002093.4</a>
<b>RefSeq Size:</b>	1639 bp
<b>RefSeq ORF:</b>	1302 bp
<b>Locus ID:</b>	2932
<b>UniProt ID:</b>	<a href="#">P49841</a>
<b>Cytogenetics:</b>	3q13.33
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Alzheimer's disease, Axon guidance, Basal cell carcinoma, B cell receptor signaling pathway, Cell cycle, Chemokine signaling pathway, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Focal adhesion, Hedgehog signaling pathway, Insulin signaling pathway, Melanogenesis, Neurotrophin signaling pathway, Pathways in cancer, Prostate cancer, T cell receptor signaling pathway, Wnt signaling pathway
<b>MW:</b>	47.9 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a serine-threonine kinase belonging to the glycogen synthase kinase subfamily. It is a negative regulator of glucose homeostasis and is involved in energy metabolism, inflammation, ER-stress, mitochondrial dysfunction, and apoptotic pathways. Defects in this gene have been associated with Parkinson disease and Alzheimer disease. [provided by RefSeq, Aug 2017]

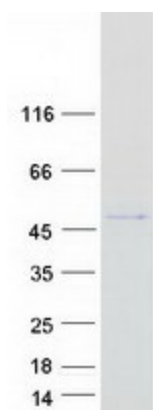
Product images:



Circular map for RC200468



Western blot validation of overexpression lysate (Cat# [LY419542]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200468 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSK3B protein (Cat# [TP300468]). The protein was produced from HEK293T cells transfected with GSK3B cDNA clone (Cat# RC200468) using MegaTran 2.0 (Cat# [TT210002]).