

Product datasheet for **KN200468**

GSK3 beta (GSK3B) Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	GSK3 beta
Locus ID:	2932
Components:	<p>KN200468G1, GSK3 beta gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CGGCTTGCAGCTCTCCGCAA</p> <p>KN200468G2, GSK3 beta gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TCCGCAAAGGAGGTGGTTCT</p> <p>KN200468D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

```

AAGGCGAGTT ACATGATCCC CCATGTTGTG CAAAAAAGCG GTTAGCTCCT TCGGTCCTCC GATCGTTGTC
AGAAGTAAGT TGGCCGAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
CATCCGTAAG ATGCTTTTCT GTGACTGGTG AGTACTCAAC CAAGTCATTC TGAGAATAGT GTATGCCGGC
ACCGAGTTGC TCTTGCCCGG CGTCAATACG GGATAATACC GCGCCACATA GCAGAATTTT AAAAGTGCTC
ATCATTGGAA AACGTTCTTC GGGGCGAAAA CTCTCAAGGA TCTTACCCTG GTTGAGATCC AGTTTCGATGT
AACCCACTCG TGCACCCAAC TGATCTTCAG CATCTTTTAC TTTACCAGC GTTTCTGGGT GAGCAAAAAC
AGGAAGGCAA AATGCCGCAA AAAAGGGAAT AAGGGCGACA CGGAAATGTT GAATACTCAT ACTCTTCCTT
TTTCAATATT ATTGAAGCAT TTATCAGGT TATTGTCTCA TGAGCGGATA CATATTTGAA TGTATTTAGA
AAAATAACA AATAGGGGTT CCGCGCAT TCCCCGAAA AGTGCCACCT GACGTCTAAG AAACCATTAT
TATCATGACA TTAACCTATA AAAATAGGCG TATCACGAGG CCCTTTCGGG TCGCGGTTT CGGTGATGAC
GGTAAAACC TCTGACACAT GCAGCTCCCG TTGACGGTCA CAGCTTGCT GTAAGCGGAT GCCGGGAGCA
GACAAGCCCG TCAGGGCGCG TCAGCGGGTG TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA
GCAGATTGTA CTGAGAGTGC ACCATAAAAT TGTAACGTT AATATTTTGT TAAAATTCGC GTTAAATTTT
TGTTAAATCA GCTCATTTTT TAACCAATAG GCCGAAATCG GCAAAATCCC TTATAATCA AAAGAATAGC
CCGAGATAGG GTTGAGTGTT GTTCCAGTTT GGAACAAGAG TCCACTATTA AAGAACGTGG ACTCCAACGT
CAAAGGGCGA AAAACCGTCT ATCAGGGCGA TGGCCCACTA CGTGAACCAT CACCAAATC AAGTTTTTTG
GGTTCGAGGT GCCGTAAAGC ACTAAATCGG AACCCATAAG GGAGCCCCCG ATTTAGAGCT TGACGGGGAA
AGCCGGCGAA CGTGCGGAGA AAGGAAGGGA AGAAAGCGAA AGGAGCGGGC GCTAGGGCGC TGGCAAGTGT
AGCGGTACG CTGCGGTAA CCACCACACC CGCCGCGCTT AATGCGCCGC TACAGGGCGC GACTATGGT
TGCTTTGACG TATGCGGTGT GAAATACCGC ACAGATCGCT AAGGAGAAAA TACCGCATCA GGCGCCATC
GCCATTCAGG CTGCGCAACT GTTGGGAAGG GCGATCGGTG CGGGCCTCTT CGTATTACG CCAGCTGGCG
AAAGGGGAT GTGCTGCAAG GCGATTAAGT TGGTAACGC CAGGGTTTTC CCAGTACGA CGTTGTAATA
CGACGGCCAG TGAATTGGAG GCTACAGTCA GTGGAGAGGA CTTTCACAGG CTGTCGCCGT GCTCATTTGA

```



[View online »](#)

TAACTGCCCG TTATTCATGC GACACCTGAC TGA CTCCGCGCC CTCTAGTTCG CCGGGCCCT
 GCCGTAGCC CGCCGATCC CGCGGCTTGC CGGAGCTGCA GCGTTTCCCG TCGCATCTCC GAGCCACCC
 CTCCTCCCT CTCCTCCCT CCTACCCATC CCCCTTCTC TTCAAGCGTG AGACTCGTGA TCCTCCGCC
 GCTTCCCTTC TTCATTGACT CGGAAAAAAA ATCCCGGAGG AAAATATAAT ATTCTGAAGTA CTCATTTTCA
 ATCAAGTATT TGCCCCGTT TCACGTGATA CATATTTTTT TAGGATTTGC CCTCTCTTTT CTCTCCTCCC
 AGGAAAGGGA GGGGAAAGAA TTGTATTTTT TCCCAAGTCC TAAATCATCT ATATGTTAAA TATCCGTGCC
 GATCTGTCTT GAAGGAGAAA TATATCGCTT GTTTTTTTTT TTATAGTATA CAAAAGGAGT GAAAAGCCAA
 GAGGACGAAG TCTTTTTCTT TTTCTTCTGT GGGAGA ACTT AATGCTGCAT TTATCGTTAA CCTAACACCC
 CAACATAAAG ACAAAGGAA GAAAAGGAGG AAGGAAGGAA AAGGTGATTC GCGAAGAGAG TGATCCCTAG
 CATGGAGAGC GACGAGAGCG GCCTGCCCGC CATGGAGATC GAGTGCCGCA TCACCGGCAC CCTGAACGGC
 GTGGAGTTCG AGCTGGTGGG CGGCGGAGAG GGCACCCCGC AGCAGGGCCG CATGACCAAC AAGATGAAGA
 GCACCAAAGG CGCCTGACC TTCAGCCCTT ACCTGCTGAG CCACGTGATG GGCTACGGCT TCTACCACTT
 CGGCACCTAC CCCAGCGGCT ACGAGAACC CTTCCTGCAC GCCATCAACA ACGGCGGCTA CACCAACACC
 CGCATCGAGA AGTACGAGGA CGGCGGCGTG CTGCACGTGA GCTTCAGCTA CCGCTACGAG GCCGGCCGG
 TGATCGGCGA CTTCAAGGTG ATGGGCACCG GCTTCCCGA GGACAGCGTG ATCTTACCAC ACAAGATCAT
 CCGCAGCAAC GCCACCGTGG AGCACCTGCA CCCCATGGGC GATAACGATC TGATGGCAG CTTACCCGC
 ACCTTCAGCC TCGCGACGG CGGCTACTAC AGCTCCGTGG TGGACAGCCA CATGCACCTT AAGAGCGCCA
 TCCACCCAG CATCCTGCAG AACGGGGGCC CCATGTTCCG CTTCCGGCCG GTGGAGGAGG ATCACAGCAA
 CACCGAGCTG GGCATCGTGG AGTACCAGCA CGCCTTCAAG ACCCCGGATG CAGATGCCGG TGAAGAAAGA
 GTTTAAGAAT TCCGATCATA TTCAATAACC CTTAATATAA CTTCTGTATA TGTATGCTAT ACGAAGTTAT
 TAGGTCTGAA GAGGAGTTTA CGTCCAGCCA AGCTTAGGAT CTCGACCTCG AAATTCTACC GGGTAGGGGA
 GGCCTTTTC CCAAGGCAGT CTGGAGCATG CGCTTTAGCA GCCCGCTGG GCACCTGGCG CTACACAAGT
 GGCCTCTGGC CTCGCACACA TTCCACATCC ACCGATAGGC GCCAACCGAC TCCGTTCTTT GTTGGCCCTT
 TCGCGCCACC TTCTACTCCT CCCTAGTCA GGAAGTTCCC CCCC GCCCGCAGCTCGCGT CCGTGCAGGAC
 GTGACAAATG GAAGTAGCAC GTCTACTAG TCTCGTGAG ATGGACAGCA CCGCTGAGCA ATGGAAGCGG
 GTAGGCCTTT GGGGAGCGG CCAATAGCAG CTTTGTCTCT TCGCTTCTG GGCTCAGAGG CTGGGAAGGG
 GTGGGTCCGG GGGCGGCTC AGGGGCGGGC TCAGGGGCGG GCGGGCGCC CGAAGGTCTT CCGGAGGCC
 GGCATTCTGC ACGCTTCAA AGCGCACGTC TGCCGCGCTG TTCTCCTCTT CCTCATCTCC GGGCCTTTCG
 ACCTGCATCC ATCTAGATCT CGAGCAGCTG AAGCTTACCA TGACCGAGTA CAAGCCACG GTGCGCCTCG
 CCACCCGCGA CGACGTCCC AGGGCCGTAC GCACCCTCGC CGCCGCGTTC GCCGACTACC CCGCCACGCG
 CCACACCGTC GATCCGGACC GCCACATCGA GCGGGTACC GAGCTGCAAG AACTCTTCTT CACGCGGCTC
 GGGCTCGACA TCGCAAGGT GTGGGTGCGG GACGACGGCG CCGCGGTGGC GGTCTGACC ACGCCGAGA
 GCGTCAAGC GGGGCGGTG TTCGCCGAGA TCGGCCCGC CATGGCCGAG TTGAGCGGTT CCCGGCTGGC
 CGCGCAGCAA CAGATGGAAG GCCTCCTGGC GCCGACCGG CCAAGGAGC CCGCGTGGT CCTGGCCACC
 GTCGGCGTCT CGCCGACCA CCAGGGCAAG GGTCTGGGCA GCGCCGTCGT GCTCCCCGA GTGGAGGCGG
 CCGAGCGCGC CGGGGTGCC GCCTTCTTGG AGACCTCCG GCCCACAACT CTCCCCTTCT ACGAGCGGCT
 CGGCTTACC GTCACCGCCG ACGTCGAGGT GCCCGAAGGA CCGCGCACCT GGTGCATGAC CCGCAAGCCC
 GGTGCCTGAC GCCCGCCCA CGACCCGACG CGCCGACCG AAAGGAGCGC ACGACCCAT GCATCGATGA
 TATCAGATCC CCGGATGCA GAAATTGATG ATCTATTA CAATAAAGAT GTCCACTAAA ATGGAAGTTT
 TTCTGTCTAT ACTTTGTTAA GAAGGTGAG AACAGAGTAC CTACATTTT AATGGAAGGA TTGGAGCTAC
 GGGGTGGGG GTGGGTGGG ATTAGATAAA TGCTGTCTT TTAAGTGAAG CTCTTTACTA TTGCTTTATG
 ATAATGTTT ATAGTTGGAT ATCATAATTT AAACAAGCAA AACCAAATTA AGGGCCAGCT CATTCTCTCC
 ACTCATGATC TATAGATCTA TAGATCTCTC GTGGGATCAT TGTTTTTCTT TTGATTTCCA CTTTGTGGTT
 CTAAGTACTG TGGTTTCAA ATGTGTCAGT TTCATAGCCT GAAGAACGAG ATCAGCAGCC TCTGTTCCAC
 ATACACTTCA TTCTCAGTAT TGTTTTGCCA AGTTCTAATT CCATCAGAAG CTGGTCGAGA TCCGGAACCC
 TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCCCTCG AAGAGGTTCA CTAGGCGCGC
 CCACCCCTT TCCACCTCGC CCTTAAAATA AGAACCTCG AAATACCAGG ATCTGAAATT ATTAGACCTC
 CTGATAACA GGCAATGGAA AAGGGCAAAA CCTATCTTCA GTCAAGGATG AAGCAGTCC CTTTTTACTC
 CTCCCATACC CCTCCCCG GTCTCATTAA CTTGAATTG AGATAATATG ATATTTATTT GGATGATTCTG
 ATTTCAAAC GCTTTCTTGT ACTTTTCTTG CTGTTGGTAG TCAGTTTCAT CAAGTGCTCG AGTGTTTCCA
 CGTTAAAGTA GTGATGACAG TGTTTACTTG CCCATCCTTT AGAATAAAGA GAAGGACAAG ATTTGATTAC
 TAAACCATTA TGCACATTTG CAGAATTTTT GGAATTTGGA ATGAGAGAAT ATTTTAGGTC TCAGGGGTTA

TCATAGTTTG ATATACTTAA TAGAGACGTT AAATGTCCCA CCCTCCCAAC ATTTTTTTCT TGTGTTGATG
 ACTACACATA ATATTTGTTC TTAATCTGTG GATGAACTTC CTCAGTAACC ATTCACATTT GGAGGCTGCC
 ATTGATTTCT CTCTTTAGAA GGGACTAGTG GGAGCCAATA ATCACTCTCG CCGGTTGGAC TTTAGATCAG
 AAGGGATCTT GCTGCCGCC GAAAGAGGAA GGGCTGGAAG AGGAAGGAGC TTGGCGTAAT CATGGTCATA
 GCTGTTTCCT GTGTGAAATT GTTATCCGCT CACAATTCCA CACAACATAC GAGCCGGAAG CATAAAGTGT
 AAAGCCTGGG GTGCCTAATG AGTGAGCTAA CTCACATTAA TTGCGTTGCG CTCACTGCCC GCTTTCCAGT
 CGGGAAACCT GTCGTGCCAG CTGCATTAAT GAATCGGCCA ACGCGCGGGG AGAGGCGGTT TGCATATTGG
 GCCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG GTCGTTTCGGC TCGGGCGAGC GGTATCAGCT
 CACTCAAAGG CGGTAATACG GTTATCCACA GAATCAGGGG ATAACGCAGG AAAGAACATG TGAGCAAAAAG
 GCCAGCAAAA GGCCAGGAAC CGTAAAAAGG CCGCGTTGCT GGCGTTTTTC CATAGGCTCC GCCCCCCTGA
 CGAGCATCAC AAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG ATACCAGGCG
 TTTCCCCCTG GAAGCTCCCT CGTGCGCTCT CCTGTTCCGA CCCTGCCGCT TACCGGATAC CTGTCCGCT
 TTCTCCCTTC GGGAAGCGTG GCGCTTTCTC ATAGCTCAG CTGTAGGTAT CTCAGTTCGG TGTAGGTCGT
 TCGCTCCAAG CTGGGCTGTG TGCACGAACC CCCCCTCAG CCCGACCCT GCGCCTTATC CGGTAACTAT
 CGTCTTGAGT CCAACCCGGT AAGACACGAC TTATCGCCAC TGGCAGCAGC CACTGGTAAC AGGATTAGCA
 GAGCGAGGTA TGTAGGCGGT GCTACAGAGT TCTTGAAGTG GTGGCCTAAC TACGGCTACA CTAGAAGAAC
 AGTATTTGGT ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GGAAAAAGAG TTGGTAGCTC TTGATCCGGC
 AAACAAACCA CCGCTGGTAG CCGTGGTTTT TTTGTTTGA AGCAGCAGAT TACGCGCAGA AAAAAAGGAT
 CTCAAGAAGA TCCTTTGATC TTTTCTACGG GGTCTGACGC TCAGTGGAAC GAAAACCTAC GTTAAGGGAT
 TTTGGTCATG AGATTATCAA AAAGGATCTT CACCTAGATC CTTTTAAATT AAAAATGAAG TTTTAAATCA
 ATCTAAAGTA TATATGAGTA AACTTGGTCT GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG
 CGATCTGTCT ATTTTCGTTCA TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACCTACG TACGGGAGGG
 CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAA CCACGCTCAC CGGCTCCAGA TTTATCAGCA
 ATAAACCAGC CAGCCGGAAG GGCCGAGCGC AGAAGTGGTC CTGCAACTTT ATCCGCCTCC ATCCAGTCTA
 TTAATTGTTG CCGGGAAGCT AGAGTAAGTA GTTCGCCAGT TAATAGTTTG CGCAACGTTG TTGCCATTGC
 TACAGGCATC GTGGTGTAC GCTCGTCGTT TGGTATGGCT TCATTCAGCT CCGGTTCCCA ACGATC

GE100003, scramble sequence in pCas-Guide vector

Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_001146156](#), [NM_002093](#), [NM_001354596](#)

UniProt ID:

[P49841](#)

Synonyms:

glycogen synthase kinase-3 beta; glycogen synthase kinase 3 beta; GSK3beta isoform

Summary:

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:

