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# Product datasheet for RC208698

## GSK3 alpha (GSK3A) (NM_019884) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | GSK3 alpha (GSK3A) (NM_019884) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | GSK3 alpha |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC208698 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGCGGCGGCGGGCCTTCGGGAGGCGGCCCTGGGGGCTCGGGCAGGGCGCGGACTAGCTCGTTCGCGG
AGCCCGGCGGCGGAGGCGGAGGAGGCGGCGGCGGCCCCGGAGGCTCGGCCTCCGGCCCAGGCGGCACCGG
CGGCGGAAAGGCATCTGTCGGGGCCATGGGTGGGGGCGTCGGGGCCTCGAGCTCCGGGGGTGGACCCGGC
GGCAGCGGCGGAGGAGGCAGCGGAGGCCCCGGCGCAGGCACTAGCTTCCCGCCGCCCGGGGTGAAGCTGG
GCCGTGACAGCGGGAAGGTGACCACAGTCGTAGCCACTCTAGGCCAAGGCCCAGAGCGCTCCCAAGAAGT
GGCTTACACGGACATCAAAGTGATTGGCAATGGCTCATTTGGGGTCGTGTACCAGGCACGGCTGGCAGAG
ACCAGGGAACTAGTCGCCATCAAGAAGGTTCTCCAGGACAAGAGGTTCAAGAACCGAGAGCTGCAGATCA
TGCGTAAGCTGGACCACTGCAATATTGTGAGGCTGAGATACTTTTTCTACTCCAGTGGCGAGAAGAAAGA
CGAGCTTTACCTAAATCTGGTGCTGGAATATGTGCCCGAGACAGTGTACCGGGTGGCCCGCCACTTCACC
AAGGCCAAGTTGACCATCCCTATCCTCTATGTCAAGGTGTACATGTACCAGCTCTTCCGCAGCTTGGCCT
ACATCCACTCCCAGGGCGTGTGTCACCGCGACATCAAGCCCCAGAACCTGCTGGTGGACCCTGACACTGC
TGTCCTCAAGCTCTGCGATTTTGGCAGTGCAAAGCAGTTGGTCCGAGGGGAGCCCAATGTCTCCTACATC
TGTTCTCGCTACTACCGGGCCCCAGAGCTCATCTTTGGAGCCACTGATTACACCTCATCCATCGATGTTT
GGTCAGCTGGCTGTGTACTGGCAGAGCTCCTCTTGGGCCAGCCCATCTTCCCTGGGGACAGTGGGGTGGA
CCAGCTGGTGGAGATCATCAAGGTGCTGGGAACACCAACCCGGGAACAAATCCGAGAGATGAACCCCAAC
TACACGGAGTTCAAGTTCCCTCAGATTAAAGCTCACCCCTGGACAAAGGTGTTCAAATCTCGAACGCCGC
CAGAGGCCATCGCGCTCTGCTCTAGCCTGCTGGAGTACACCCCATCCTCAAGGCTCTCCCCACTAGAGGC
CTGTGCGCACAGCTTCTTTGATGAACTGCGATGTCTGGGAACCCAGCTGCCTAACAACCGCCCACTTCCC
CCTCTCTTCAACTTCAGTGCTGGTGAACTCTCCATCCAACCGTCTCTCAACGCCATTCTCATCCCTCCTC
ACTTGAGGTCCCCAGCGGGCACTACCACCCTCACCCCGTCCTCACAAGCTTTAACTGAGACTCCGACCAG
CTCAGACTGGCAGTCGACCGATGCCACACCTACCCTCACTAACTCCTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208698 protein sequence
Red=Cloning site Green=Tags(s)

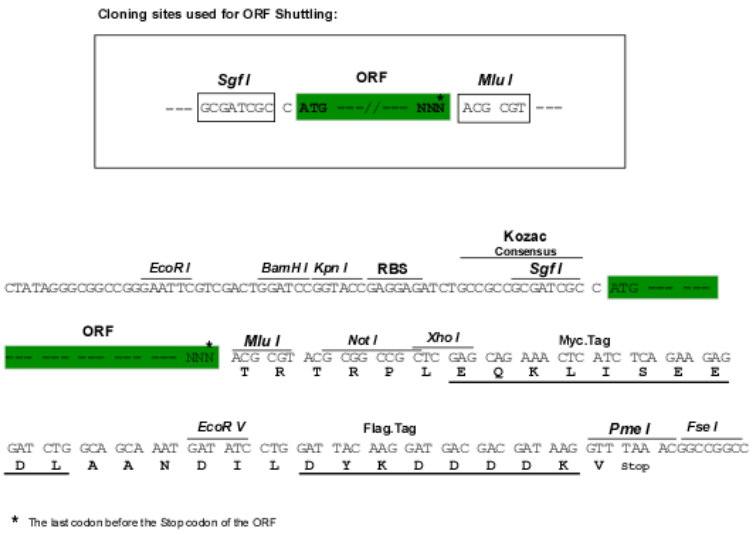
MSGGGPSGGGPGGSGRARTSSFAEPGGGGGGGGGGPGGSASGPGGTGGGKASVGAMGGGVGASSSGGGPG
GSGGGGSGGPGAGTSFPPPGVKLGRDSGKVTTVVATLGQGPERSQEVAYTDIKVIGNGSFGVVYQARLAE
TRELVAIKKVLQDKRFKNRELQIMRKLDHCNIVRLRYFFYSSGEKKDELYLNLVLEYVPETVYRVARHFT
KAKLTIPILYVKVYMYQLFRSLAYIHSQGVCHRDIKPQNLLVDPDTAVLKLCDFGSAKQLVRGEPNVSYI
CSRYYRAPELIFGATDYTSSIDVWSAGCVLAELLLGQPIFPGDSGVDQLVEIIKVLGTPTREQIREMNPN
YTEFKFPQIKAHPWTKVFKSRTPPEAIALCSSLLEYTPSSRLSPLEACAHSFFDELRCLGTQLPNNRPLP
PLFNFSAGELSIQPSLNAILIPPHLRSPAGTTTLTPSSQALTETPTSSDWQSTDATPTLTNSS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6271_c05.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_019884

**ORF Size:** 1449 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_019884.3

**RefSeq Size:** 2200 bp

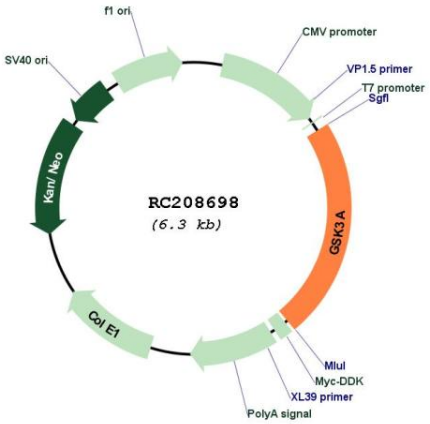
**RefSeq ORF:** 1452 bp

**Locus ID:** 2931

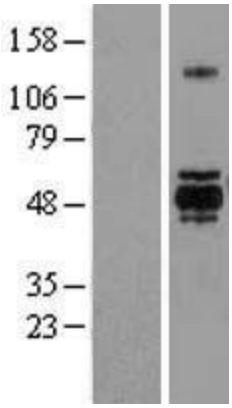
**UniProt ID:** P49840

| | |
|---|---|
| **Cytogenetics:** | 19q13.2 |
| **Domains:** | pkinase, TyrKc, S_TKc |
| **Protein Families:** | Druggable Genome, Protein Kinase |
| **Protein Pathways:** | Chemokine signaling pathway |
| **MW:** | 51 kDa |
| **Gene Summary:** | This gene encodes a multifunctional Ser/Thr protein kinase that is implicated in the control of several regulatory proteins including glycogen synthase, and transcription factors, such as JUN. It also plays a role in the WNT and PI3K signaling pathways, as well as regulates the production of beta-amyloid peptides associated with Alzheimer's disease. [provided by RefSeq, Oct 2011] |

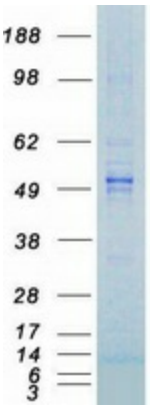
## Product images:




Circular map for RC208698




Western blot validation of overexpression lysate (Cat# [LY412674]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208698 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified GSK3A protein (Cat# [TP308698]). The protein was produced from HEK293T cells transfected with GSK3A cDNA clone (Cat# RC208698) using MegaTran 2.0 (Cat# [TT210002]).