

## Product datasheet for **TP308698L**

### GSK3 alpha (GSK3A) (NM\_019884) Human Recombinant Protein

#### Product data:

**Product Type:** Recombinant Proteins

**Description:** Recombinant protein of human glycogen synthase kinase 3 alpha (GSK3A), 1 mg

**Species:** Human

**Expression Host:** HEK293T

**Expression cDNA** >RC208698 protein sequence

**Clone or AA** **Red**=Cloning site **Green**=Tags(s)

**Sequence:**

MSGGGPSGGGPGGSGRARTSSFAEPGGGGGGGGGGPGGSASGPGGTGGGKASVGAMGGGVGASSSGGGPG  
GSGGGGSGGPGAGTSFPPPGVKLGRDSGKVTTWATLGQGPERSQEVAYTDIKVINGSFVWYQARLAE  
TRELVAIKKVLQDKRFKNRELQIMRKLDCNIVRLRYFFYSSGEKKDELYLNLVLEYVPETVYRVARHFT  
KAKLTIPILYVKVYMYQLFRSLAYIHSQGVCHRDIKPQNLLVDPDTAVLKLCDFGSAKQLVRGEPNVSYI  
CSRYRAPELIFGATDYTSSIDVWSAGCVLAELLLGQPIFGDSDGVDQLVEIKVLGTPPTREQUIREMNP  
N YTEFKFPQIKAHPWTKVFKSRTPPEAIALCSSLLEYTPSSRLSPLEACAHSFFDELRCGLTQLPNNRPLP  
PLFNFSAGELSIQPSLNAILIPPHLRSPAGTTTLTPSSQALTETPTSSDWQSTDATPTLTNSS

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Tag:** C-Myc/DDK

**Predicted MW:** 50.8 kDa

**Concentration:** >0.05 µg/µL as determined by microplate BCA method

**Purity:** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

**Bioactivity:** In vitro kinase assay (enzyme) (PMID: [26618561](https://pubmed.ncbi.nlm.nih.gov/26618561/))

Thermophoresis assay (PMID: [26618561](https://pubmed.ncbi.nlm.nih.gov/26618561/))

**Preparation:** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

**Note:** For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

**Storage:** Store at -80°C.



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**Stability:** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**RefSeq:** [NP\\_063937](#)

**Locus ID:** 2931

**UniProt ID:** [P49840](#), [A0A024R0L5](#)

**RefSeq Size:** 2200

**Cytogenetics:** 19q13.2

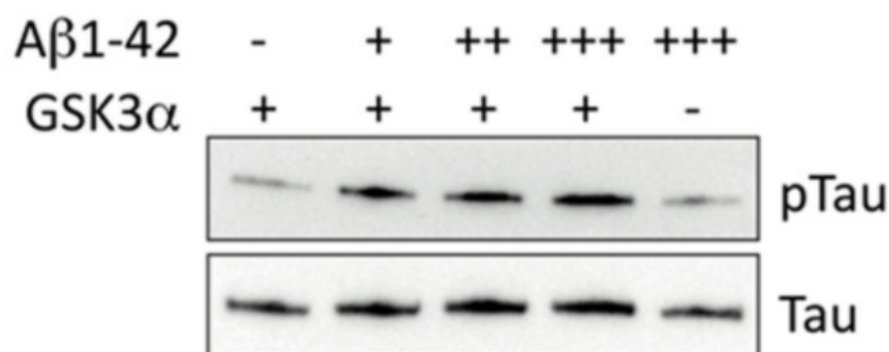
**RefSeq ORF:** 1449

**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]

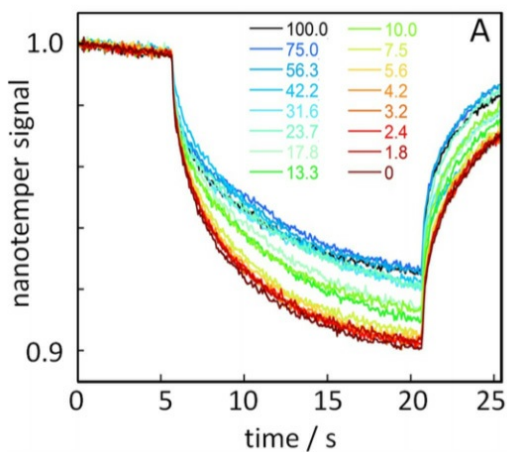
**Protein Families:** Druggable Genome, Protein Kinase

**Protein Pathways:** Chemokine signaling pathway

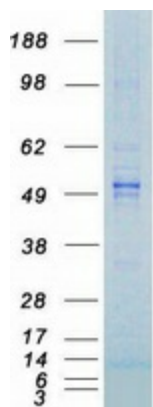
### Product images:



Tau phosphorylation assay. Tau and pTau were detected in Western blot after a kinase assay reaction in the absence (-) or the presence of Abeta1-40 at 5 (+), 50 (++) or 500 nM (+++), and the absence (-) or the presence (+) of GSK3alpha (OriGene [TP308698]). Figure cited from ACS Chem Neurosci, PMID: 26618561



Thermophoresis analysis of the interaction between Abeta42 and GSK3alpha. Thermophoresis time traces at 37 C for the 16 capillaries containing solutions with 60 nM Abeta42 alone and varying concentrations of GSK3alpha (OriGene [TP308698]) from 0 to 188 nM. The example shown is recorded after 635 min, and the GSK3alpha concentrations are listed as the percentage of the highest (188 nM). Figure cited from ACS Chem Neurosci, PMID: 26618561



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]).