

GSK3b recombinant protein

Recombinant GSK3b protein

CATALOG # AAA60173	HOST Baculovirus
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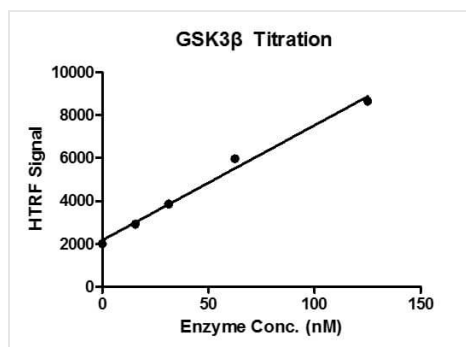
PRODUCT SYNONYMS

GSK3b; Recombinant GSK3b protein; Glycogen Synthase Kinase 3 Beta; GSK-3 Beta; GSK3b recombinant protein

PRODUCT SPECIFICATIONS

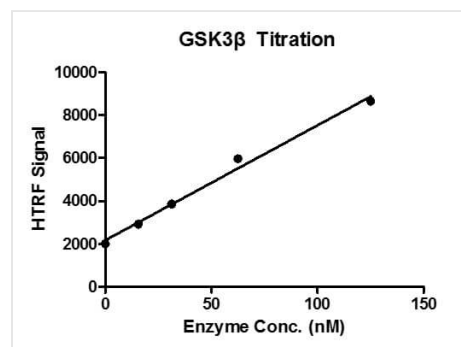
Host	Baculovirus
Form/Format	Recombinant GSK3b protein is supplied in 25mM HEPES-NaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Notes	Recombinant GSK3b protein is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



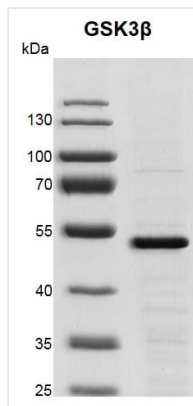
Application Data

HTRF assay for GSK3b activity 1 uM STK S3 substrate was incubated with different concentrations of GSK3b protein in a 10 ul reaction system containing 1xEnzymatic Buffer, 5 mM MgCl₂, 1 mM DTT and 100 uM ATP for 1 hour. The detection reagents were added and incubated with the reactions for 1 hr. All the operations and reactions were performed at room temperature, and HTRF KinASE STK assay was used to detect the enzymatic activity.



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SDS-PAGE

Recombinant GSK3b protein 10% SDS-PAGE Coomassie staining MW: 48.4 kDa Purity: ? 95%

ADDITIONAL INFORMATION

Related Product Information for GSK3b recombinant protein	Short Description: Recombinant human GSK3b protein was expressed in a baculovirus expression system as the full-length protein (accession number NP_001139628.1) with an N-terminal DYKDDDDK-Tag. The molecular weight of the protein is 48.4 kDa. It is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. Background: GSK3b (Glycogen Synthase Kinase 3 Beta), 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. GSK3b a constitutively active protein kinase that acts as a negative regulator in the hormonal control of glucose homeostasis, Wnt signaling and regulation of transcription factors and microtubules, by phosphorylating and inactivating glycogen synthase (GYS1 or GYS2), EIF2B, CTNNB1/beta-catenin, APC, AXIN1, DPYSL2/CRMP2, JUN, NFATC1/ NFATC, MAPT/TAU and MACF1. It contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis. And it may also mediate the development of insulin resistance by regulating activation of transcription factors. GSK3b can regulate protein synthesis by controlling the activity of initiation factor 2B (EIF2BE/EIF2B5) in the same manner as glycogen synthase. In Wnt signaling, GSK3b forms a multimeric complex with APC, AXIN1 and CTNNB1/beta-catenin and phosphorylates the N-terminus of CTNNB1 leading to its degradation mediated by ubiquitin/proteasomes. In addition, it can negatively regulate replication in pancreatic beta-cells, resulting in apoptosis, loss of beta-cells and diabetes. Through phosphorylation of the anti-apoptotic protein MCL1, GSK3b may control cell apoptosis in response to growth factors deprivation. It regulates the circadian clock via phosphorylation of the major clock components including ARNTL/BMAL1, CLOCK and PER2, which might promote their degradation.
Product Categories/Family for GSK3b recombinant protein	Recombinant Proteins

NCBI AND UNIPROT INFORMATION

NCBI GI #	225903437
NCBI GeneID	2932
NCBI Accession #	NP_001139628.1
NCBI GenBank Nucleotide #	NM_001146156.1
UniProt Accession #	P49841 ; Q9BWH3 ; Q9UL47 ; D3DN89
Molecular Weight	46,744 Da
NCBI Official Full Name	glycogen synthase kinase-3 beta isoform 2
NCBI Official Synonym Full Names	glycogen synthase kinase 3 beta

NCBI Official Symbol	GSK3B
NCBI Protein Information	glycogen synthase kinase-3 beta; GSK-3 beta; GSK3beta isoform; serine/threonine-protein kinase GSK3B
UniProt Protein Name	Glycogen synthase kinase-3 beta
UniProt Gene Name	GSK3B
UniProt Synonym Gene Names	GSK-3 beta
UniProt Entry Name	GSK3B_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/gsk3b-recombinant-protein-baculovirus/60173>