

## Chicken Polyclonal GSK3 beta antibody

Catalog Number: GSK3B-301Y

Lot Number:

### General Information

<b>Product</b>	GSK3 beta Antibody
<b>Description</b>	Affinity Purified Glycogen Synthase Kinase-3 beta Antibody
<b>Accession #</b>	Uniprot: P49841
<b>Verified Applications</b>	ELISA, IP, WB
<b>Species Cross Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Chicken
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 1-50 on human GSK3 beta protein.
<b>Alternative Nomenclature</b>	Glycogen Synthase Kinase 3 Beta antibody GSK 3 beta antibody Serine/threonine-protein kinase GSK3B antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.68 mg/ml IgY in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

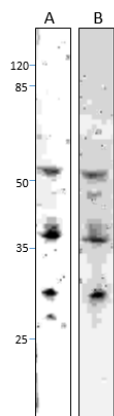
<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

### Related Products

### Catalog #

<b>Affinity Purified</b>	GSK3B-Y-FITC
<b>BIOTIN-Conjugated</b>	GSK3B-Y-BIOTIN
<b>Antigenic Blocking Peptide</b>	P-GSK3B-Y
<b>Western Blot Positive Control</b>	PC-GSK3B

## Application Verification:



Western blot of Glycogen synthase kinase 3 beta (GSK3B-301Y) antibody with rat liver sample.

Apparent MW of GSK3 beta is 53kDa.

A. Total IgY; B. Affinity purified GSK3b antibody

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

## Overview:

Glycogen Synthase Kinase 3 beta (GSK3B) is an enzymatic protein and 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 (1). GSK3B is also involved in energy metabolism, neuronal cell development, and body pattern formation (2). Glycogen synthase kinase-3 is a proline-directed serine-threonine kinase that was identified as a phosphorylating and inactivating agent of glycogen synthase. Both GSK3A and GSK3B show high degrees of amino acid homology (1). GSK3B is activated by phosphorylation at the Tyr-216 residue. In response to insulin, GSK3B is inhibited by phosphorylation at Ser-9 residue by PKB/AKT1 and RPS6KA3 protein. The phosphorylation by PKB/AKT1 and RPS6AK3 cause a conformational change preventing substrates to access the active site. GSK3B is also inhibited by lithium (3)

The GSK3 beta antibody was developed in chicken utilizing an amino acid sequence taken within the first 50 amino acids on human GSK3 beta protein. The IgY immunoglobulins were affinity purified over immobilized antigen based affinity chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. Antigenic blocking peptides and western blot positive control for GSK3 beta in ready-to-use buffer for Western blotting are available. FabGennix will conjugate antibodies with fluorescent probes or secondary enzymes upon request at a reasonable cost. For a complete listing of all antibodies and lab services, please visit <http://fabgennix.com>.

## References:

1. Stambolic, Vuk, and James R. Woodgett. "Mitogen inactivation of glycogen synthase kinase-3 $\beta$  in intact cells via serine 9 phosphorylation." *Biochemical Journal* 303.3 (1994): 701-704.
2. Plyte, Simon E., et al. "Glycogen synthase kinase-3: functions in oncogenesis and development." *Biochimica et Biophysica Acta (BBA)-Reviews on Cancer* 1114.2 (1992): 147-162.
3. Ali, Adnan, Klaus P. Hoefflich, and James R. Woodgett. "Glycogen synthase kinase-3: properties, functions, and regulation." *Chemical reviews* 101.8 (2001): 2527-2540.

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.