

# **GSK3**β (Phospho-Ser9) polyclonal antibody

Catalog: BS94042

Host: R

Rabbit

Reactivity: Human

## **BackGround:**

Glycogen synthase kinase-3a (GSK-3a) and GSK-3ß are highly similar isoforms of serine/ threonine kinases that regulate metabolic enzymes and transcription factors, which are responsible for coordinating processes such as glycogen synthesis and cell adhesion. GSK-3ß activity is also required for nuclear activity of Rel dimers, which mediate an anti-apoptotic response to TNFa in mice. GSK-3 catalytic kinase activity is controlled through differential phosphorylation of serine/threonine residues, which have an inhibitory effect, and tyrosine residues, which have an activating effect. Growth factor stimulation of mammalian cells expressing GSK-3a and GSK-3β induces phosphorylation of Ser 21 and Ser 9, respectively, through a phosphatidylinositol 3-kinase (PI 3-K)-protein kinase B (PKB)-dependent pathway, thereby enhancing proliferative signals. Additionally, GSK-3 physically associates with cAMP-dependent protein kinase A (PKA), which phosphorylates Ser 21 of GSK-3a or Ser 9 of GSK-3 $\beta$  and inactivates both forms. GSK-3 $\alpha/\beta$  is positively regulated by phosphorylation on Tyr 279 and Tyr 216, respectively. Activated GSK-3α/β participates in energy metabolism, neuronal cell development, and body pattern formation. Tyrosine dephosphorylation of GSK-3 is involved in its extracellular signal-dependent inactivation.

#### **Product:**

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2

**Molecular Weight:** 

## 47 kDa

Swiss-Prot:

P49841(Human)

**Purification&Purity:** 

ProA affinity purified

**Applications:** 

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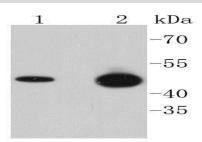
WB:1:1,000-1:2,000 ICC:1:50-1:200 IHC:1:50-1:200 Storage&Stability:

Store at +4  $^{\circ}$ C after thawing. Aliquot store at -20  $^{\circ}$ C or -80  $^{\circ}$ C. Avoid repeated freeze / thaw cycles.

### **Specificity:**

GSK3 $\beta$  (Phospho-Ser9) polyclonal antibody detects endogenous levels of GSK3 $\beta$  protein only when phosphorylated at Ser9.

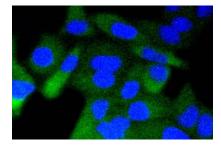
## DATA:



Western blot analysis of Phospho-GSK3 beta(Ser 9) on different lysates using anti-Phospho-GSK3 beta(Ser 9) antibody at 1/1,000 dilution. Positive control:

Lane 1: Hela

Lane 2: MCF-7



ICC staining Phospho-GSK3 beta(Ser 9) in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

#### Note:

For research use only, not for use in diagnostic procedure.

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