

## GSK3 $\alpha$ / $\beta$ (Phospho-Y216/Y279) polyclonal antibody

Catalog: BS94064

Host: Rabbit

Reactivity: Human, Mouse, Rat

### BackGround:

Glycogen synthase kinase-3 $\alpha$  (GSK-3 $\alpha$ ) and GSK-3 $\beta$  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-3 $\beta$  activity is also required for nuclear activity of Rel dimers, which mediate an anti-apoptotic response to TNF $\alpha$  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-3 $\alpha$  and GSK-3 $\beta$  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-3 $\alpha$  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-3 $\alpha$ / $\beta$  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:

51 kDa

### Swiss-Prot:

P49840(Human) P49841(Human) Q2NL51(Mouse)  
Q9WV60(Mouse) P18265(Rat) P18266(Rat)

### Purification&Purity:

ProA affinity purified

### Applications:

WB:1:1,000

ICC:1:100-1:500

IHC:1:50-1:200

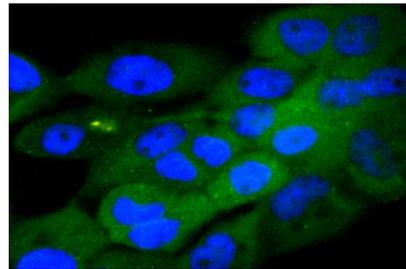
### Storage&Stability:

Store at +4 °C after thawing. Aliquot store at -20 °C or -80 °C. Avoid repeated freeze / thaw cycles.

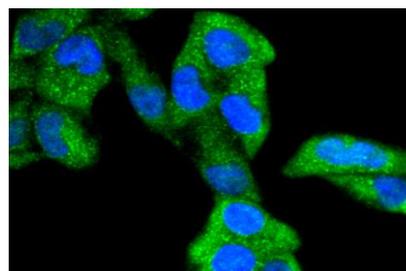
### Specificity:

GSK3 $\alpha$ / $\beta$  (Phospho-Y216/Y279) polyclonal antibody detects endogenous levels of GSK3 $\alpha$ / $\beta$  protein only when phosphorylated at Tyr279/216

### DATA:



ICC staining Phospho-GSK3(alpha+beta)(Y216+Y279) in A431 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



ICC staining Phospho-GSK3(alpha+beta)(Y216+Y279) 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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## PRODUCT DATA SHEET

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