Data Sheet (Cat.No.TMAC-03220)

Anti-Phospho-GSK3B (Ser 9) Antibody (9V640)

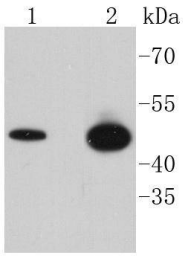
Product Details

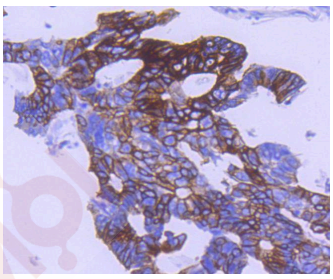
Ig Type:	IgG
Reactivity:	Human
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 47 kDa.
Clone:	9V640
Purification:	ProA affinity purified

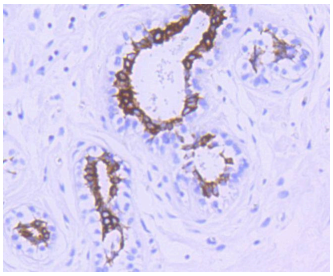
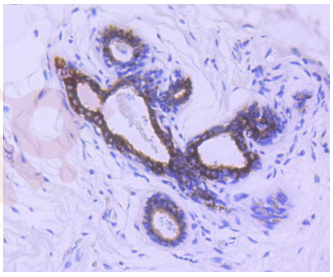
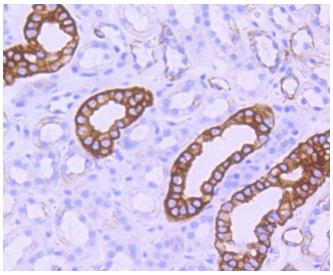
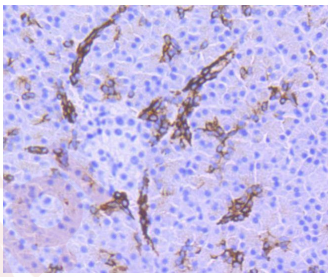
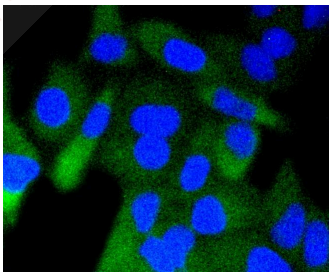
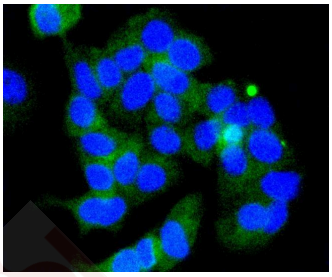
Applications

Verified Activity:

1. 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.
2. Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Phospho-GSK3 beta (Ser 9) antibody. Counter stained with hematoxylin.
3. Immunohistochemical analysis of paraffin-embedded human breast tissue using anti-Phospho-GSK3 beta (Ser 9) antibody. Counter stained with hematoxylin.
4. Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using anti-Phospho-GSK3 beta (Ser 9) antibody. Counter stained with hematoxylin.
5. Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Phospho-GSK3 beta (Ser 9) antibody. Counter stained with hematoxylin.
6. Immunohistochemical analysis of paraffin-embedded human pancreas tissue using anti-Phospho-GSK3 beta (Ser 9) antibody. Counter stained with hematoxylin.
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.
8. ICC staining Phospho-GSK3 beta (Ser 9) in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.





Application: ICC/IF,IHC,WB

Recommended WB: 1:1000-2000; IHC: 1:50-200; ICC/IF: 1:50-200

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: A synthesized phosphopeptide: human GSK3 beta around the phosphorylation site of Ser9

Antigen Species: Human

Uniprot ID: P49841

Synonyms: GSK3B (p-S 9);GSK3B (p-Ser 9);p-GSK3B (Ser 9);p-GSK3B (S 9)

Research Background

Glycogen synthase kinase-3α (GSK-3α) and GSK-3β 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-3β activity is also required for nuclear activity of Rel dimers, which mediate an apoptotic response to TNFα 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-3α 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-3α or Ser 9 of GSK-3β and inactivates both forms. GSK-3α/β 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.

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