

## GSK3 $\beta$ Polyclonal Antibody

<b>Catalog No :</b>	YT2082
<b>Reactivity :</b>	Human;Mouse;Rat;Rabbit
<b>Applications :</b>	IF;WB;IHC;IP;ELISA
<b>Target :</b>	GSK3 $\beta$
<b>Fields :</b>	>>EGFR tyrosine kinase inhibitor resistance;>>ErbB signaling pathway;>>Chemokine signaling pathway;>>Cell cycle;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>Wnt signaling pathway;>>Hedgehog signaling pathway;>>Axon guidance;>>Hippo signaling pathway;>>Focal adhesion;>>Signaling pathways regulating pluripotency of stem cells;>>IL-17 signaling pathway;>>T cell receptor signaling pathway;>>B cell receptor signaling pathway;>>Neurotrophin signaling pathway;>>Dopaminergic synapse;>>Insulin signaling pathway;>>Melanogenesis;>>Prolactin signaling pathway;>>Thyroid hormone signaling pathway;>>Insulin resistance;>>Non-alcoholic fatty liver disease;>>Cushing syndrome;>>Growth hormone synthesis, secretion and action;>>Alcoholic liver disease;>>Alzheimer disease;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Shigellosis;>>Yersinia infection;>>Hepatitis C;>>Measles;>>Human cytomegalovirus infection;>>Human papillomavirus infection;>>Kaposi sarcoma-associated herpes
<b>Gene Name :</b>	GSK3B
<b>Protein Name :</b>	Glycogen synthase kinase-3 beta
<b>Human Gene Id :</b>	2932
<b>Human Swiss Prot No :</b>	P49841
<b>Mouse Gene Id :</b>	56637
<b>Mouse Swiss Prot No :</b>	Q9WV60
<b>Rat Gene Id :</b>	84027
<b>Rat Swiss Prot No :</b>	P18266

<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human GSK3B. AA range:1-50
<b>Specificity :</b>	GSK3 $\beta$ Polyclonal Antibody detects endogenous levels of GSK3 $\beta$ protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. Immunoprecipitation: 2-5 ug:mg lysate. ELISA: 1:20000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	47kD
<b>Cell Pathway :</b>	ErbB_HER;Chemokine;Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;WNT;WNT-T CELLHedgehog;Axon guidance;Focal adhesion;T_Cell_Receptor;B_Cell_Antigen ;Neurotrophin;Insulin_Receptor;Melanogenesis;Alzheimer's disease;
<b>Background :</b>	The protein encoded by this gene is a serine-threonine kinase, belonging to the glycogen synthase kinase subfamily. It is involved in energy metabolism, neuronal cell development, and body pattern formation. Polymorphisms in this gene have been implicated in modifying risk of Parkinson disease, and studies in mice show that overexpression of this gene may be relevant to the pathogenesis of Alzheimer disease. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009],
<b>Function :</b>	catalytic activity:ATP + [tau protein] = ADP + [tau protein] phosphate.,enzyme regulation:Inhibited when phosphorylated by AKT1.,function:Participates in the Wnt signaling pathway. Implicated in the hormonal control of several regulatory proteins including glycogen synthase, MYB and the transcription factor JUN. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. Phosphorylates MUC1 in breast cancer cells, and decreases the interaction of MUC1 with CTNNB1/beta-catenin.,PTM:Phosphorylated by AKT1 and ILK1.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. GSK-3 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Monomer (By similarity). Interacts with CABYR, MUC1, NIN and PRUNE.,tissue specificity:Expressed in testis, thymus, prostate

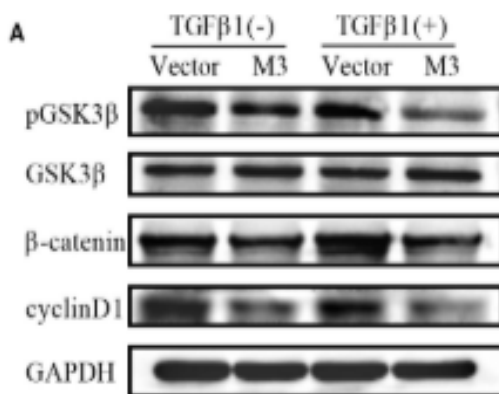
**Subcellular Location :**

Cytoplasm . Nucleus . Cell membrane . The phosphorylated form shows localization to cytoplasm and cell membrane (PubMed:20937854). The MEMO1-RHOA-DIAPH1 signaling pathway controls localization of the phosphorylated form to the cell membrane (PubMed:20937854) .

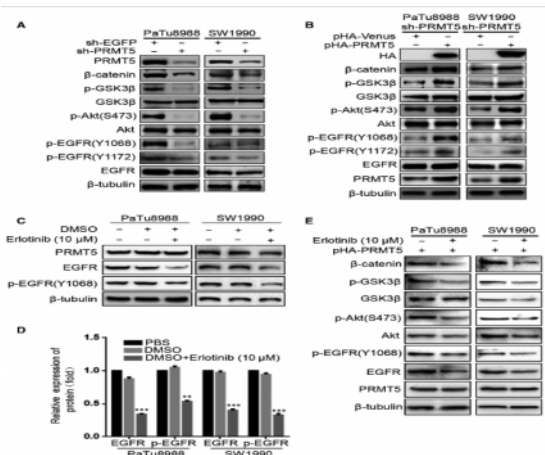
**Expression :**

Expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney. Colocalizes with EIF2AK2/PKR and TAU in the Alzheimer disease (AD) brain.

## Products Images

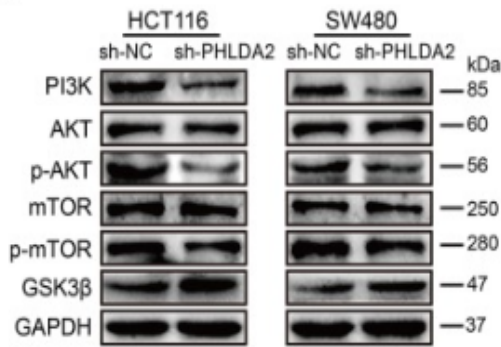


Ma, Xinqi, et al. "METTL3 attenuates proliferative vitreoretinopathy and epithelial-mesenchymal transition of retinal pigment epithelial cells via wnt/β-catenin pathway." *Journal of Cellular and Molecular Medicine* 25.9 (2021): 4220-4234.



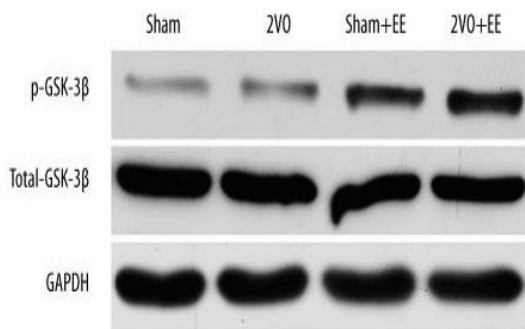
Ge, Lu, et al. "PRMT5 promotes epithelial-mesenchymal transition via EGFR-β-catenin axis in pancreatic cancer cells." *Journal of cellular and molecular medicine* 24.2 (2020): 1969-1979.

**A**

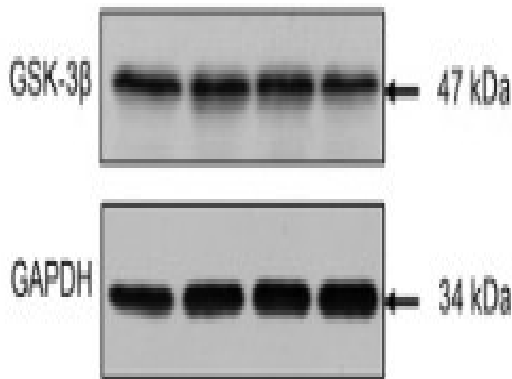


Ma, Zhan, Shuping Lou, and Zheng Jiang. "PHLDA2 regulates EMT and autophagy in colorectal cancer via the PI3K/AKT signaling pathway." *Aging (Albany NY)* 12.9 (2020): 7985.

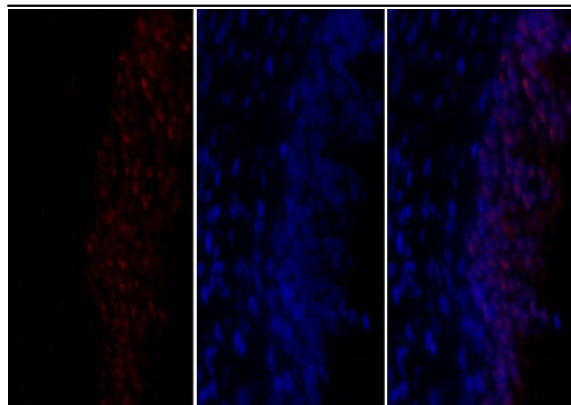
**B**



Jin, Xinhao, et al. "Environmental Enrichment Improves Spatial Learning and Memory in Vascular Dementia Rats with Activation of Wnt/β-Catenin Signal Pathway." *Medical science monitor: international medical journal of experimental and clinical research* 23 (2017): 207.



Ou, Liping, et al. "Dickkopf Wnt signaling pathway inhibitor 1 regulates the differentiation of mouse embryonic stem cells in vitro and in vivo." *Molecular medicine reports* 13.1 (2016): 720-730.

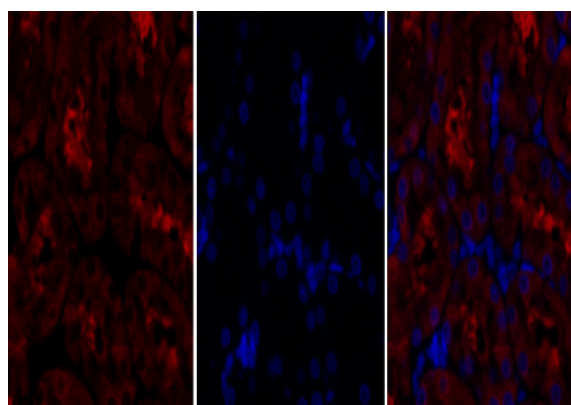


A

B

C

Immunofluorescence analysis of rat-lung tissue. 1, GSK3 $\beta$  Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

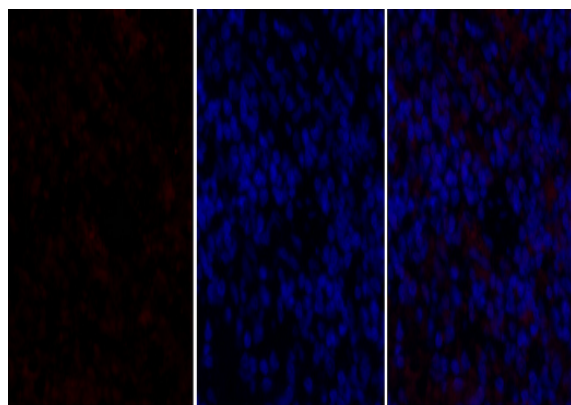


A

B

C

Immunofluorescence analysis of rat-kidney tissue. 1, GSK3 $\beta$  Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



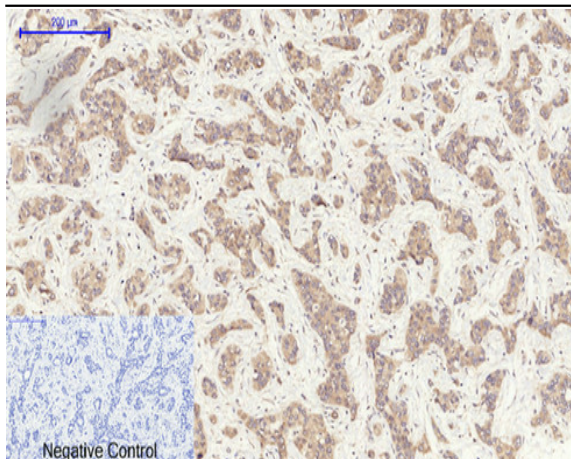
A

B

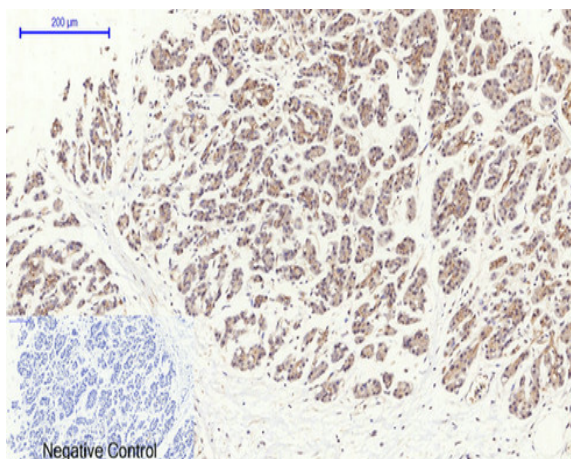
C

Immunofluorescence analysis of rat-spleen tissue. 1, GSK3 $\beta$  Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

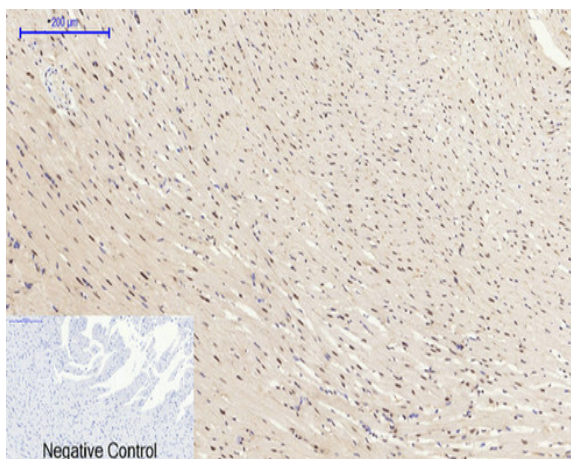




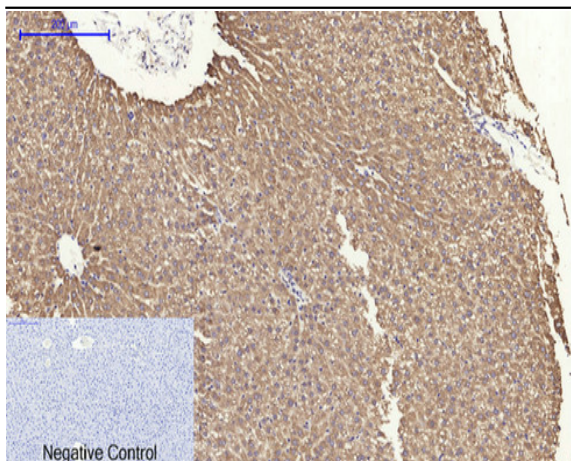
Immunohistochemical analysis of paraffin-embedded Human-liver-cancer tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



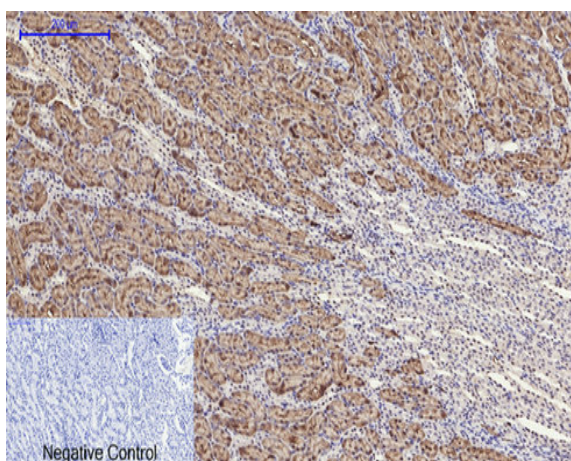
Immunohistochemical analysis of paraffin-embedded Human-stomach-cancer tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



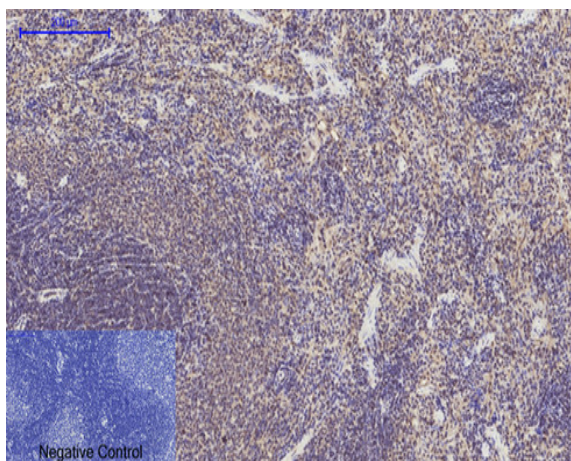
Immunohistochemical analysis of paraffin-embedded Rat-heart tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Rat-liver tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

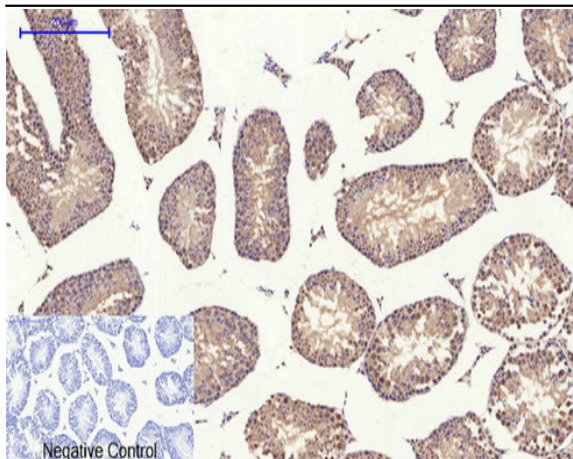


Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

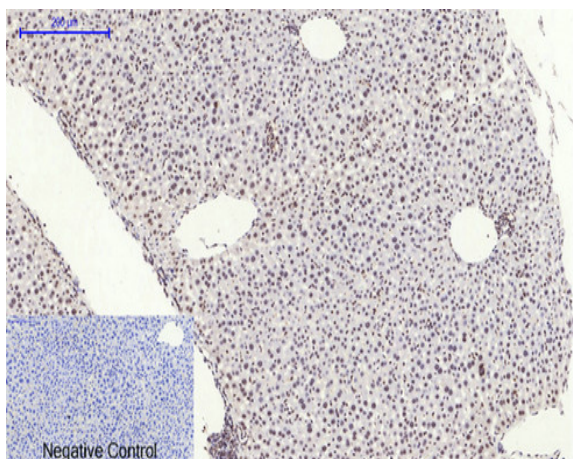


Immunohistochemical analysis of paraffin-embedded Rat-spleen tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

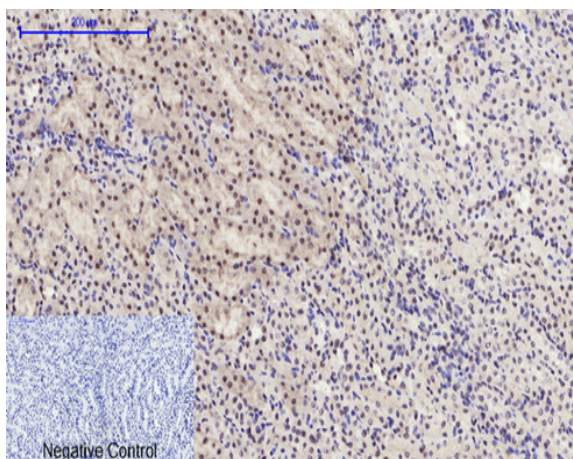




Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

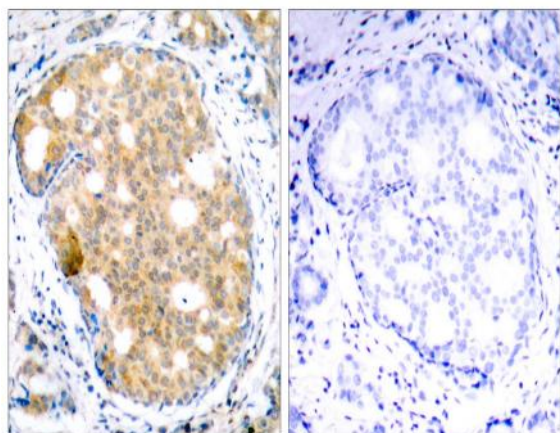


Immunohistochemical analysis of paraffin-embedded Mouse-liver tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

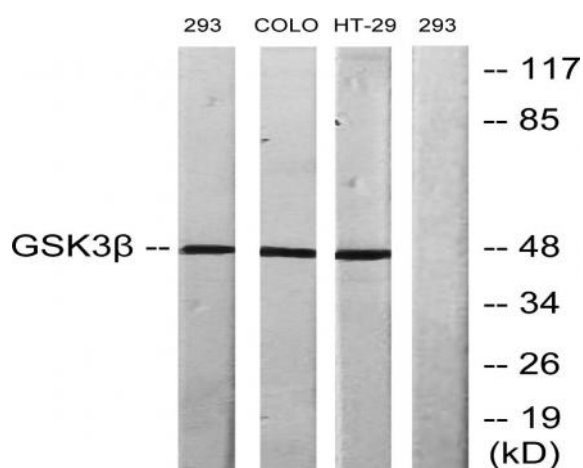


Immunohistochemical analysis of paraffin-embedded Mouse-kidney tissue. 1, GSK3 $\beta$  Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.

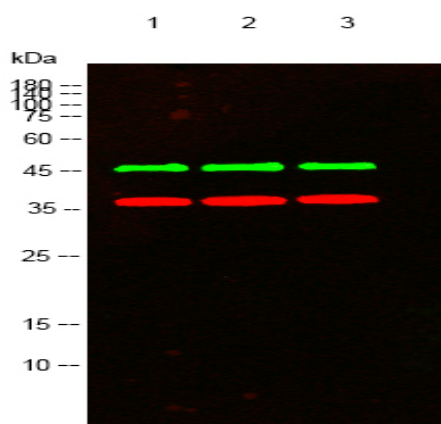




Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using GSK3 beta Antibody. The picture on the right is blocked with the synthesized peptide.

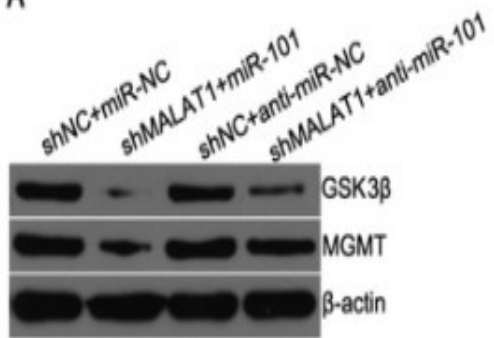


Western blot analysis of lysates from 293, COLO205, and HT29 cells, using GSK3 beta Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from 1) 3T3, 2) HT29, 3) 293 cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody(cat:RS23920)was diluted at 1:10000, 37° 1hour. (Red) GAPDH Monoclonal Antibody(2B8) (cat:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night,secondary antibody(cat:RS23710)was diluted at 1:10000, 37° 1hour.

A



Cai, Tao, Yu Liu, and Jie Xiao. "Long noncoding RNA MALAT 1 knockdown reverses chemoresistance to temozolomide via promoting micro RNA-101 in glioblastoma." *Cancer medicine* 7.4 (2018): 1404-1415.