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Product datasheet for TA336772

GSK3 beta (GSK3B) Mouse Monoclonal Antibody [Clone ID: 3D10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	3D10
Applications:	FC, IF, IHC, WB
Recommend Dilution:	WB: 1:500-1:2000, ELISA: 1:10000, FC: 1:200-1:400, IF: 1:200-1:1000, IHC: 1:200-1:1000, IHC-P: 1:200-1:1000
Reactivity:	Human, Mouse, Primate, Rat
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Purified recombinant fragment of human GSK3 beta expressed in E. coli. [UniProt# P49841]
Formulation:	PBS, 0.03% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	1 mg/ml
Purification:	Ammonium sulfate precipitation
Predicted Protein Size:	46 kDa
Gene Name:	glycogen synthase kinase 3 beta
Database Link:	NP_002084 Entrez Gene 56637 Mouse Entrez Gene 84027 Rat Entrez Gene 2932 Human

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Background: GSK3 (Glycogen synthase kinase 3), a serine-threonine kinase with two isoforms (alpha and beta), was originally discovered as a key enzyme in glycogen metabolism. GSK3 was subsequently shown to function in cell division, proliferation, motility and survival. GSK3 plays a role in a number of pathological conditions including cancer and diabetes and is increasingly seen as an important component of neurological diseases. GSK3 phosphorylates tau and presenilin-1, which are involved in the development of Alzheimer's disease. Both isoforms of GSK3 are ubiquitously expressed, although particularly high levels of GSK 3 beta are found in the brain where it is involved in synaptic plasticity, possibly via regulation of NMDA receptor trafficking. GSK3 phosphorylates over 40 different substrates including signaling proteins, transcription factors and structural proteins, and is part of the signal transduction cascade of a large number of growth factors and cytokines. The activity of GSK is regulated by phosphorylation (Akt: Akt-mediated phosphorylation at Ser21 of GSK3 alpha and Ser9 of GSK3 beta, S6K, RSK, PKA and PKC), dephosphorylation (PP1 and PP2A), and by binding to protein complexes (with beta-catenin, axin, CK1 and the APC complex).

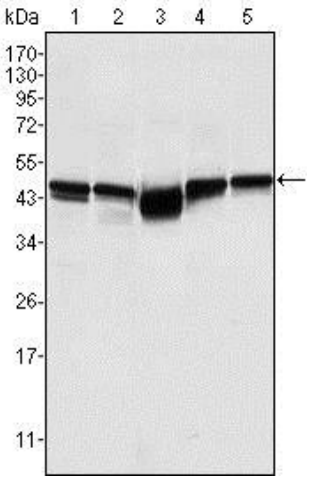
Synonyms: glycogen synthase kinase-3 beta; glycogen synthase kinase 3 beta; GSK3beta isoform

Note: This GSK3 beta (3D10) antibody is useful for Western blot, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry on paraffin-embedded sections and ELISA.

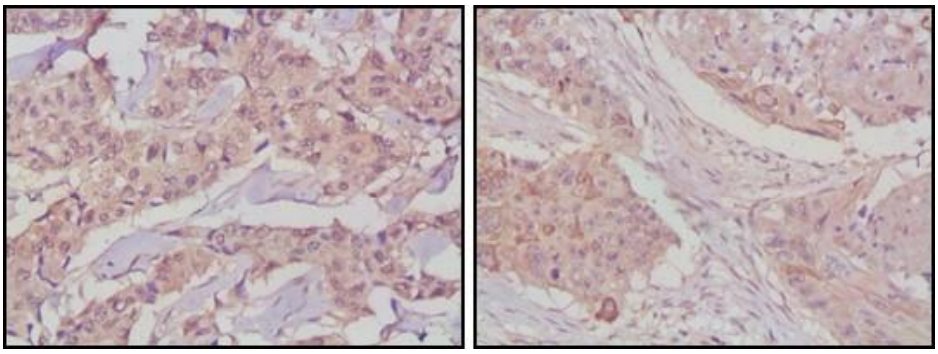
Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Alzheimer's disease, Axon guidance, Basal cell carcinoma, B cell receptor signaling pathway, Cell cycle, Chemokine signaling pathway, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Focal adhesion, Hedgehog signaling pathway, Insulin signaling pathway, Melanogenesis, Neurotrophin signaling pathway, Pathways in cancer, Prostate cancer, T cell receptor signaling pathway, Wnt signaling pathway

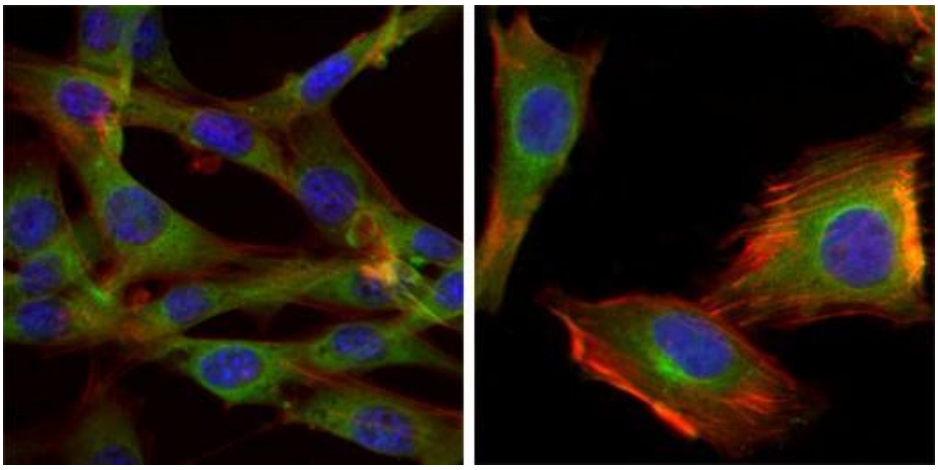
Product images:



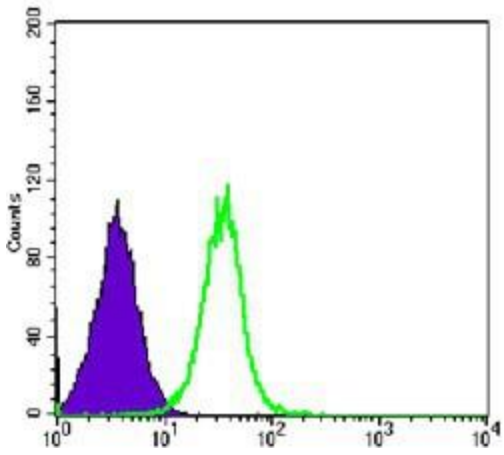
Western Blot: GSK3 beta Antibody (3D10) TA336772 - Western blot analysis using GSK3 beta mouse mAb against A549 (1), K562 (2), PC-12 (3), NIH/3T3 (4), and HEK293 (5) cell lysates.



Immunohistochemistry-Paraffin: GSK3 beta Antibody (3D10) TA336772 - Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and breast cancer tissues (right) using GSK3 beta mouse mAb with DAB staining.



Immunocytochemistry/Immunofluorescence: GSK3 beta Antibody (3D10) TA336772 - Analysis of NIH/3T3 (left) and U251 (right) cells using GSK3 beta mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-55



Flow Cytometry: GSK3 beta Antibody (3D10) TA336772 - Flow cytometric analysis of Hela cells using GSK3 beta mouse mAb (green) and negative control (purple).