

Product Specification Sheet

Cat. #MA-30006

Mouse Monoclonal Anti Human P53 Glycogen synthase kinase 3 (GSK-3) ; Ascites

SIZE : 100 ul

Glycogen synthase kinase 3 (GSK-3), a serine-threonine kinase with two isoforms (alpha and beta), was originally discovered as a key enzyme in glycogen metabolism. GSK-3 was subsequently shown to function in cell division, proliferation, motility and survival. GSK-3 plays a role in a number of pathological conditions including cancer and diabetes and is increasingly seen as an important component of neurological diseases. GSK-3 phosphorylates tau and presenilin-1, which are involved in the development of Alzheimer's disease. Both isoforms of GSK-3 are ubiquitously expressed, although particularly high levels of GSK-3beta are found in the brain where it is involved in synaptic plasticity, possibly via regulation of NMDA receptor trafficking. GSK-3 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 GSK-3 α and Ser9 of GSK-3 β , S6K, RSK, PKA and PKC), dephosphorylation (PP1 and PP2A), and by binding to protein complexes (with beta-catenin, axin, CK1 and the APC complex).

Source of Antigen and Antibodies

Antigen	Purified recombinant fragment of human GSK3B expressed in E. Coli.
Ab Host/type	Balb/c mouse. IgG2a Ascetic fluid containing 0.05% sodium azide.
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Isotype controls:

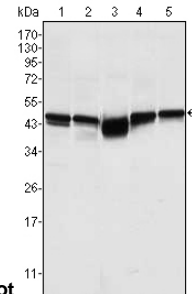
Catalog#	ProdDescription
20102-102	Mouse IgG2a isotype control, purified
20102-102-B	Mouse IgG2a-Biotin conjugate (isotype control)
20102-102-F	Mouse IgG2a-FITC conjugate (isotype control)
20102-102-FP	Mouse IgG2a-FITC-PE conjugate
20102-102-HP	Mouse IgG2a-HRP conjugate (isotype control)
20102-102-PC5	Mouse IgG2a-PE-Cy5 conjugate (isotype control)
20102-102-PE	Mouse IgG2a-PE conjugate (isotype control)

Suggested Dilutions:

Western blot	1:500 – 1:2000
Immunohistochemistry (IHC):	1:200 – 1:1000
Immunocytochemistry (ICC):	1:200 – 1:1000
Flow cytometry (FCM):	1:200 – 1:400
ELISA	1:5000 – 1:100000

Form: Antibodies are supplied in PBS, pH 7.5, 0.05% azide and 0.1% BSA in liquid (0.5-1 mg/ml) or lyophilized in the same buffer. Reconstitute powder in 100 ul water or PBS. Store at -20°C or below is suitable size Aliquots.

Shipping: 4°C for solutions and room temp for powder.



Western Blot

Figure 1: Western blot analysis using GSK3B mouse mAb against A549 (1), K562 (2), PC-12 (3), NIH/3T3 (4), and HEK293 (5) cell lysate.

Immunohistochemical analysis

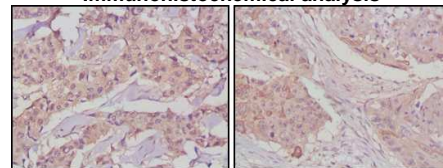


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and breast cancer tissues (right) using GSK3B mouse mAb with DAB staining.

Immunofluorescence analysis

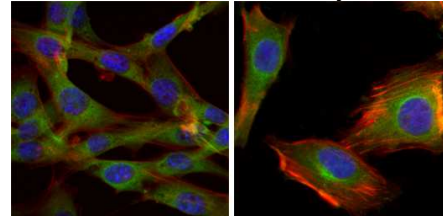


Figure 3: Immunofluorescence analysis of NIH/3T3 (left) and U251 (right) cells using GSK3B mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

Flow cytometric

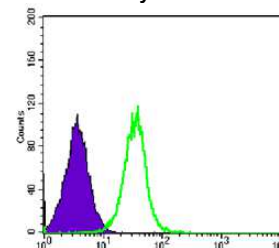


Figure 4: Flow cytometric analysis of HeLa cells using GSK3B mouse mAb (green) and negative control (purple).

References:

EMBO J. 1998 2;17(5):1371-84. Curr Biol. 2001 ;11(1):44-9.
*All products are for In vitro research use only.

Related material available from ADI

MA-30006

150824V

India Contact:

Life Technologies (India) Pvt. Ltd.