



BMA BIOMEDICALS

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Monoclonal Antibody to GSK-3

Glycogen Synthase Kinase-3 from human, rat, porcine, and other species

Monoclonal antibody 7G-1F2 recognizes GSK-3 in most species. GSK-3 has been highly conserved during evolution, and homolog genes have been identified in virtually every eukaryotic genome investigated. In mammals, GSK-3 is encoded by two genes known as *gsk-3 α* and *gsk-3 β* encoding GSK-3 α (483 aa in humans) and GSK-3 β (433 aa) proteins with apparent molecular masses of 51 and 47kDa, respectively. Both isoforms are almost identical (98%) within their ATP binding pocket but differ in their N- and C-terminal sequences. Monoclonal antibody 7G-1F2 was generated against the phosphorylated catalytic domain (between sub-domain VII and VIII) of the *Drosophila* GSK-3 / shaggy enzyme, containing the phospho-Tyrosine 279 of human GSK-3 α and phospho-Tyrosine 216 of human GSK-3 β , respectively. This antibody does not react with GSK-3 or shaggy expressed in *E. coli*, but will react with the corresponding natural enzyme or the one expressed in Sf9 cells. The observed preference for the phosphorylated form is about 50:1.

Product Number:	T-1434 (Lot 01PO1214)
Clone:	7G-1F2
Host species, isotype:	Mouse IgG1 kappa
Quantity:	100 μ g
Format:	Affinity purified, lyophilized
	Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.2mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.01% Kathon as a preservative.
Stability:	Original vial: 1 year at 4° - 8°C Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC). Approximate working dilution for IHC: Frozen sections: not tested Paraffin sections: 1 μ g/ml (1:200); microwave pretreatment in citrate buffer is recommended for antigen retrieval. Optimal dilutions should be determined by the end user. Suggested positive control: human brain Please see www.bma.ch for protocols and general information.

Immunogen:	Synthetic peptide conjugate corresponding to (C) ²⁰³ KQLLHGEPNVS ^{phospho} YICSR ²¹⁹ Y from <i>Drosophila</i> .
Antigen, epitope:	The antigen is GSK-3; the epitope is located in the catalytic domain between ²⁶⁸ K to ²⁸⁴ Y of GSK-3 α , and ²⁰⁵ K to ²²¹ Y from GSK-3 β , respectively.
Antigen distribution:	The antigen has been described in the testis, thymus, prostate and ovary, weak in the brain, lung and kidney.
Specificity:	Human: GSK-3, phosphorylated at ²⁷⁹ Y (GSK-3 α) / ²¹⁶ Y (GSK-3 β). Other: all species tested so far.

Selected references

Harwood A.J. et al.: Glycogen synthase kinase 3 regulates cell fate in *Dictyostelium*. *Cell* **80**: 139-48 (1995).

For *in vitro* research only. This product contains Kathon as a preservative.