



Anti-Phospho-Syntide-2 mAb

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures



Anti-Phospho-Syntide-2 mAb

Cat# CY-M1023

100 µg (1 mg/mL x 100 µL)

Clone Name	Applications	Species	Cross-reactivity	Molecular Wt.	Source Isotype
MS-6E6	E		N/A	N/A	Mouse IgG2b

Background: Syntide-2, a peptide based on phosphorylation site two of glycogen synthase, is an exogenous substrate designed for CaM-Kinase (calcium/calmodulin dependent kinases) in the serine-threonine kinase family. CaM-kinase II is a multifunctional calcium/calmodulin dependent protein kinase involved in neuronal functions. This anti-Phospho-Syntide-2 monoclonal antibody has been validated with CaM-kinase II, however it has the potential for use in evaluating other serine threonine kinases such as CaM-Kinase IIa, PKC μ , Akt1, Akt2, Akt3, and PKA.

The relative Vmax/Km ratios of the known Ca²⁺-dependent protein kinases for syntide-2 were determined to be as follows: protein kinase II, 100; protein kinase C, 22; phosphorylase kinase, 2; myosin light chain kinase, 0.005.

Specificity/Sensitivity: Anti-Phospho-Syntide-2 mAb (MS-6E6) detects phosphorylated Syntide-2 only when phosphorylated at serine residue, by ELISA.

Source/Purification: Monoclonal antibody is produced by immunizing mice with a synthetic phosphopeptide Syntide-2, PLARTL(pS)VAGLPGKK, which is synthetic substrate for CaM-Kinase II (Calmodulin dependent protein kinase II). IgG is purified by protein A-sepharose chromatography.

Recommended Antibody Dilutions: ELISA for detection of CaM-Kinase II activity: 1 µg/mL

Storage: Supplied in 20 mM phosphate buffer (pH 7.5), 300 mM NaCl, 50 % glycerol. Store at -20°C.

Applications Key:

WB: Western blotting, **IP:** Immunoprecipitation, **IHC:** Immunohistochemistry, **IC:** Immunocytochemistry, **F:** Flow cytometry, **E:** ELISA, **FP:** Fluorescence polarization assay

Species Cross-Reactivity Key:

H: Human, **M:** Mouse, **R:** Rat, **Hm:** Hamster, **Mk:** Monkey, **Mi:** Mink, **C:** Chicken, **X:** Xenopus, **Z:** Zebra fish (Species enclosed in parentheses are predicted to react based on 100 % sequence homology.)

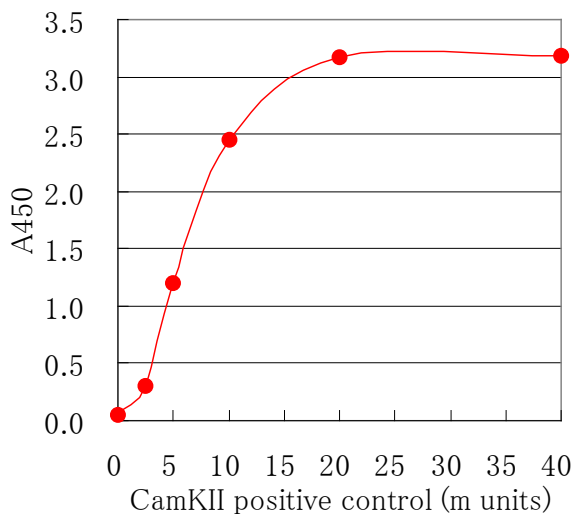


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References:

1. Hashimoto Y, Soderling TR. Calcium, calmodulin-dependent protein kinase II and calcium phospholipid-dependent protein kinase activities in rat tissues assayed with a synthetic peptide. Arch Biochem Biophys. 252(2):418-25, 1987
2. CM Schworer, RJ Colbran, and TR Soderling Reversible generation of a Ca²⁺-independent form of Ca²⁺(calmodulin)- dependent protein kinase II by an autophosphorylation mechanism J. Biol. Chem., 261: 8581 – 8584, 1986

Fig.1 ELISA for measurement of recombinant CaM-kinase II activity using Anti-Phospho-Syntide-2 mAb (MS-6E6) in CycLex CaM-kinase II Assay/Inhibitor Screening Kit (Cat# CY-1173)



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