



## 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 $\mu$ , Akt1, Akt2, Akt3, and PKA.

The relative Vmax/Km ratios of the known Ca<sup>2+</sup>-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

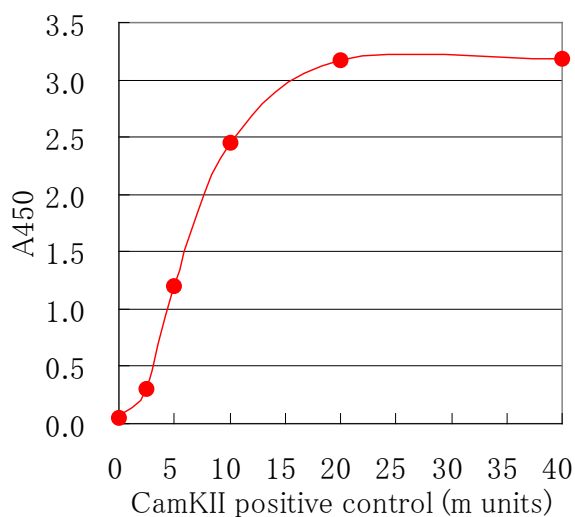
**Species Cross-Reactivity Key:**

**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.)

**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  $\text{Ca}^{2+}$ -independent form of  $\text{Ca}^{2+}$ (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)**



For more information, please visit our web site.

<https://ruo.mbl.co.jp/>

**MANUFACTURED BY**

**MBL** A JSR Life Sciences Company  
MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.  
URL: <https://ruo.mbl.co.jp>  
E-mail: [support@mbi.co.jp](mailto:support@mbi.co.jp)

CycLex/CircuLex products are supplied for research use only. CycLex/CircuLex products and components thereof may not be resold, modified for resale, or used to manufacture commercial products without prior written approval from MBL. To inquire about licensing for such commercial use, please contact us via email.