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# Anti Ca<sup>2+</sup>/Calmodulin-Dependent Protein Kinase II δ1-δ4 Polyclonal Antibody

Ca<sup>2+</sup>/calmodulin-dependent protein kinase II (CaM kinase II) may play key roles in various Ca<sup>2+</sup> -induced cellular functions. Interestingly, many kinds of isoforms have been identified in various tissues or cells. Recently, it has been revealed that some isoforms are located in specific regions in the cells, so it is speculated that these isoforms have physiologically particular functions in each region.

There are four different isoforms such as  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$ . This antibody reacts with  $\delta$  1 -  $\delta$  4 splice variants. Immunochemical studies indicate that  $\delta$  2 is expressed in various tissues or cells such as insulinoma cells and that  $\delta$  3 is abundant in the nucleus in cerebellar granule cells. These results suggest that  $\delta$  3 is involved in Ca<sup>2+</sup> -dependent gene expression.

This antibody has been proved to be useful for the immunoblotting and immunohistochemistry.

Package Size  $200 \mu g$  (  $200 \mu L/vial$  )

Format Rabbit polyclonal antibody 1 mg/mL

Buffer 0.1% Proclin as bacteriostat, 2% Block Ace as a stabilizer in PBS

Storage Store below -20°C

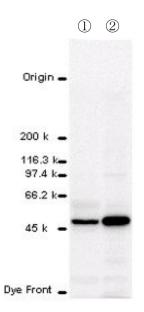
Once thawed, store at 4°C. Repeated freeze-thaw cycles should be avoided.

Purification method This antibody was purified from rabbit serum immunized with 15-amino acid

segment from unique carboxyl-terminal ends of CaM kinaseII  $\delta$  1-  $\delta$  4

isoforms by Protein G affinity chromatography.

Working dilution Immunohistochemistry: 15  $\mu$  g/mL ,for immunoblotting: 10 $\sim$ 20  $\mu$  g/mL



## **Immunoblotting**

#### Sample:

- ① MIN6 (control)
- ② MIN6 (after overexpression of  $\delta$  2)

Preparation of antibodies and instruction

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### [Reference]

- 1. Matumono, K., Ebihara, K., Yamamono, H., Tabuchi, H., Fukunaga, K., Yasunami, M., Ohkubo, H., Shichiri, M., Miyamoto, E: *J.Biol.Chem.*, 274, 2053-2059 (1999)
- 2. Tabuchi, H., Yamamoto, H., Matsumoto, K., Ebihara, K., Takeuchi, Y., Fukunaga, K., Hiraoka, H., Sakai Y., Shichiri, M., Miyamoto, E.: *Endocrinology*, 141,2350-2360 (2000)
- 3. Takeuchi, Y., Yamamoto. H., Matsimoto, K., Kimura, T., Katsuragi, S., Miyakawa, T., Miyamoto, E.: *J.Neurochem.*,72.815-825 (1999)
- 4. Takeuchi, Y., Yamamoto, H., Miyakawa, T., Miyamoto, E.: J. Neurochem.,74,1913-1922 (2000)
- 5. Takeuchi, Y., Yamamoto, H., Fukunaga, K., Miyakawa, T., Miyamoto, E.: *J. Neurochem.*,74,2557-2567 (2000)

Supplier



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