DB107: PKC (MC5)

Background:

To date at least 12 different protein kinase C (PKC) isoforms have been identified that possess distinct differences in structure, substrate requirement, expression and localization (1). The PKC family of serine/threonine protein kinases is a ubiquitous group involved in complex intracellular signaling processes that are mediated though phospholipid hydrolysis (2). The general structure of a PKC molecule consists of a catalytic and a regulatory domain; composed of a number of conserved regions interspersed with variable domains. The PKC isoforms have been divided into three groups, conventional PKC isoforms (α, βI, βII, and γ), novel PKC isoforms (δ, ε, η, θ, and μ), and atypical PKC isoforms (ξ, and λ/ι). The more recently identified PKCν shows the most sequence homology to PKCμ. The conventional PKC isoforms require calcium and diacylglycerol (DAG) for activation, the novel isoforms require DAG, and the atypical PKC isoforms require neither calcium nor DAG (3).

Origin:

PKC (MC5) is provided as a mouse monoclonal IgG_{2a} derived from the fusion of X-63 myeloma cells with spleen cells from a BALB/c mouse immunized with protein kinase C purified from bovine brain.

Product Details:

Each vial contains 100 μg/ml of mouse monoclonal IgG_{2a} PKC (MC5) DB107, in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

Specificity:

PKC (MC5) DB107 reacts with PKC of mouse, rat and human origin by Western blotting and immunoprecipitation. Western blotting starting dilution: 1:200. Will recognize alpha, beta and gamma PKC.

Storage:

Store this product at 4º C, do not freeze. The product is stable for one year from the date of shipment.

References:

1. Way KJ, Chou E, King GL. 2000. Identification of PKC-isoform-specific biological actions using pharmacological approaches. Trends Pharmacol Sci. 21(5): 181-187.
2. Liu WS, Heckman CA. 1998. The sevenfold way of PKC regulation. Cell Signal. 10(8): 529-542.
3. Gschwendt M. 1999. Protein kinase C delta. Eur J Biochem. 259(3): 555-564.

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