

## Native Rat Protein Kinase C Catalytic Subunit

Cat. No. NATE-0578

Lot. No. (See product label)

### Introduction

**Description** Protein Kinase C (PKC) is a serine/threonine kinase that is activated intracellularly by signal transduction pathways that produce DAG from phosphatidylinositol diphosphate (PIP<sub>2</sub>) and phosphatidylcholine (PC) through the action of various activated phospholipases. Phorbol esters also stimulate PKC. At least 11 PKC isozymes have been identified that differ in primary structure, tissue distribution, subcellular localization, response to extracellular signals, and substrate specificity. The isozymes can be grouped into three subfamilies. Members of the first family require Ca<sup>2+</sup> and phospholipid and include PKC $\alpha$ ,  $\beta$ I,  $\beta$ II, and  $\gamma$ . Members of the second family are phospholipid-dependent but Ca<sup>2+</sup>-independent, and include PKC $\delta$ ,  $\epsilon$ ,  $\eta$ , and  $\theta$ . Members of the third family are not activated by either DAG or phorbol esters and include PKC $\xi$ ,  $\mu$ , and  $\iota$ .

**Synonyms** PKC-M, PKM; PKCM; Protein Kinase C Catalytic Subunit

### Product Information

<b>Species</b>	Rat
<b>Source</b>	rat brain
<b>Purity</b>	> 90% (SDS-PAGE)
<b>Activity</b>	> 800 units/mg protein
<b>Concentration</b>	25 $\mu$ g/mL protein
<b>Buffer</b>	Storage buffer: 20 mM Tris-HCl, pH 7.5, 2 mM EGTA, 2 mM EDTA, 1 mM DTT, 10 mM potassium phosphate, 50% glycerol, 0.05% Triton™ X-100
<b>Pathway</b>	B Cell Receptor Signaling Pathway, organism-specific biosystem; Calcium Regulation in the Cardiac Cell, organism-specific biosystem; EGFR1 Signaling Pathway, organism-specific biosystem; G Protein Signaling Pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of lipids and lipoproteins, organism-specific biosystem; Myometrial Relaxation and Contraction Pathways, organism-specific biosystem
<b>Function</b>	ATP binding; metal ion binding; nucleotide binding; protein kinase C activity; protein serine/threonine kinase activity; protein serine/threonine kinase activity
<b>Unit Definition</b>	One unit will transfer of 1 nanomole of phosphate per minute at 30°C using Histone III as substrate and phosphatidylserine as an activator.

### Usage and Packaging

<b>Package</b>	vial of 200 ng
<b>Preparation Instructions</b>	Prepared by tryptic digestion of PKC.

### Storage and Shipping Information

<b>Stability</b>	-70°C
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