Creative Enzymes®

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 (PIP2) 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 Ca2+ and phospholipid and include PKCα, βI, βII, and γ. Members of the second family are phospholipid-dependent but Ca2+-independent, and include PKCδ, ε, η, and θ. Members of the third family are not activated by either DAG or phorbol esters and include PKCξ, μ, and ι.
Synonyms	PKC-M, PKM; PKCM; Protein Kinase C Catalytic Subunit

Product Information

Species	Rat
Source	rat brain
Purity	> 90% (SDS-PAGE)
Activity	> 800 units/mg protein
Concentration	25 μg/mL protein
Buffer	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
Pathway	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
Function	ATP binding; metal ion binding; nucleotide binding; protein kinase C activity; protein serine/threonine kinase activity; protein serine/threonine kinase activity
Unit Definition	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

Package	vial of 200 ng
Preparation Instructions	Prepared by tryptic digestion of PKC.

Storage and Shipping Information

Stability	−70°C

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