Creative Enzymes®

Protein kinase Cα isozyme human, Recombinant

Cat. No. NATE-0574

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	PRKCA; protein kinase C, alpha; PKCA; protein kinase C alpha type; PKC-A; PKCα; AAG6; PKC-alpha; PRKACA

Product Information

Species	Human
Source	baculovirus infected insect cells
Form	buffered aqueous glycerol solution
Molecular Weight	mol wt 80-81 kDa by SDS-PAGE
Purity	> 70% (SDS-PAGE)
Buffer	Solution in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol and 0.25 mM DTT
Pathway	ATF-2 transcription factor network, organism-specific biosystem; African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Aldosterone-regulated sodium reabsorption, organism-specific biosystem; Aldosterone-regulated sodium reabsorption, conserved biosystem; Alpha6-Beta4 Integrin Signaling Pathway, organism-specific biosystem; Amoebiasis, organism-specific biosystem
Function	ATP binding; enzyme binding; histone kinase activity (H3-T6 specific); metal ion binding; nucleotide binding; protein binding; protein kinase C activity; protein kinase activity; protein kinase activity; protein serine/threonine kinase activity; zinc ion binding
Unit Definition	One unit will transfer 1 pmol of phosphate to CREBtide in 1 min at pH 7.2 at 30°C

Storage and Shipping Information

Stability	−70°C