

## Protein Kinase Cδ isozyme from human, Recombinant

Cat. No. NATE-0623

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  $\text{Ca}^{2+}$  and phospholipid and include PKC $\alpha$ ,  $\beta$ I,  $\beta$ II, and  $\gamma$ . Members of the second family are phospholipid-dependent but  $\text{Ca}^{2+}$ -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

PRKCD; protein kinase C, delta; protein kinase C delta type; ALPS3; CVID9; MAY1; PKCD; nPKC-delta; EC 2.7.1.37

### Product Information

#### Species

Human

#### Source

Baculovirus infected insect cells

#### Form

buffered aqueous glycerol solution; Solution in 20 mM HEPES, pH 7.4; 2 mM EDTA, 2 mM EGTA, 5 mM DTT, 100 mM NaCl, 0.05% Triton X-100, and 50% glycerol.

#### EC Number

EC 2.7.1.37

#### Molecular Weight

mol wt 74-79 kDa by SDS-PAGE

#### Purity

>95% (SDS-PAGE)

#### Pathway

Alpha-synuclein signaling, organism-specific biosystem; Alpha6-Beta4 Integrin Signaling Pathway, organism-specific biosystem; Apoptosis, organism-specific biosystem; Apoptotic cleavage of cellular proteins, organism-specific biosystem; Apoptotic executionphase, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; Ca-dependent events, organism-specific biosystem

#### Function

ATP binding; calcium-independent protein kinase C activity; enzyme activator activity; enzyme binding; insulin receptor substrate binding; metal ion binding; non-membrane spanning protein tyrosine kinase activity; nucleotide binding; protein C-terminus binding; protein binding; protein kinase activity; protein serine/threonine kinase activity

#### Unit Definition

One unit will transfer 1 nmol of phosphate to PKC epsilon substrate peptide in 1 min at pH 7.4 at 30°C.

### Storage and Shipping Information

#### Storage

-70°C