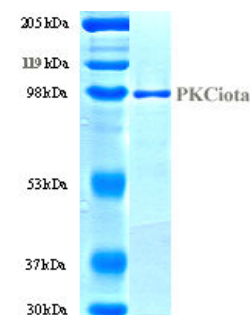


## Active PKC $\beta$ II

<b>CATALOG #:</b>	7705-5
<b>SOURCE:</b>	Sf 9 cells
<b>PURITY:</b>	1 $\mu$ g of PKC iota protein was subjected to SDS-PAGE and Coomassie blue staining. The scan of the gel showed >90% purity of the PKC iota product, and the band was at ~98 kDa
<b>SPECIFIC ACTIVITY:</b>	664 nmol/min/mg
<b>MOLECULAR WEIGHT:</b>	~98 kDa.
<b>FORMULATION:</b>	Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).
<b>STORAGE CONDITIONS:</b>	Store product frozen at or below -70°C. Stable for 1 year at -70°C as undiluted stock. Aliquot to avoid repeated thawing and freezing.

**BACKGROUND DESCRIPTION:** PKC iota is a member of the protein kinase C family of serine-threonine kinases. The amino acid sequence of PKC iota showed greatest homology to PKC zeta, with 72% identity overall rising to 84% in the catalytic domain. In contrast, the homology of PKC iota to the other isoforms is less pronounced, with < 53% identity even in the highly conserved catalytic region. PKC iota transcript is present predominantly in lung and brain, but also expressed at lower levels in many tissues including pancreatic islets. PKC iota is stimulated by tumor necrosis factor alpha (TNF- $\alpha$ ) and is required for the activation of NF- $\kappa$ B by this cytokine. Cell transfections with a PKC iota dominant negative mutant abolished TNF- $\alpha$ -induced NF $\kappa$ B-dependent transcription. PKC iota can modify vulnerability of neural cells to apoptosis induced by amyloid beta-peptide (ABP), a cytotoxic peptide linked to neuronal degeneration in Alzheimer's disease. Associated with the increased resistance to apoptosis are improved mitochondrial function and reduced activity of caspases. In addition, ABP-induced increases in levels of oxidative stress and intracellular calcium levels were attenuated in cells overexpressing PKC iota.

**ACTIVITY:** 664 nmol phosphate incorporated into CREBtide per minute per mg protein at 30°C for 15 minutes using a final concentration of 50  $\mu$ M ATP (0.83  $\mu$ Ci/assay in 25 $\mu$ l reaction volume).



PKC iota Protein Gel

### RELATED PRODUCTS:

- Active PKC a (Cat. No. 7714-5)
- Active PKC epsilon (Cat. No. 7753-5)
- Active PKC eta (Cat. No. 7731-5)
- Active PKC mu (Cat. No. 7745-5)
- Active PKC zeta (Cat. No. 7718-5)
- Active PKC delta (Cat. No. 7739-5)
- Active PKC gamma (Cat. No. 7764-5)
- Active PKC  $\beta$ II (Cat. No. 7704-5)

**FOR RESEARCH USE ONLY! Not to be used in humans.**