

Recombinant Human Protein Kinase C, Gamma, His-tagged

Cat. No. PRKCG-63H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Protein Kinase C, Gamma produced in Sf9 is a glycosylated, polypeptide chain containing amino acids 2-676 and having a molecular mass of 80 KD. This protein is the full-length form of the protein with an amino terminal poly His-tag. PKC-γ is purified by proprietary chromatographic techniques.
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Species	Human
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Source	Sf9 Cells
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Protein Length	2-676 a.a.
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Description	Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play distinct roles in cells. The protein encoded by this gene is one of the PKC family members. This protein kinase is expressed solely in the brain and spinal cord and its localization is restricted to neurons. It has been demonstrated that several neuronal functions, including long term potentiation (LTP) and long term depression (LTD), specifically require this kinase. Knockout studies in mice also suggest that this kinase may be involved in neuropathic pain development. Defects in this protein have been associated with neurodegenerative disorder spinocerebellar ataxia-14 (SCA14).
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Physical Appearance	Sterile Filtered clear solution.
Unit Definition	6000-8000 units/mg. One unit of PKC-γ activity transfers 1 nmole of phosphate to a PKC substrate peptide (myelin basic protein 4-14) per minute at 30°C. Recombinant human active PKC-γ also phosphorylates full length myelin basic protein, histone, MARKS, and GSK-3. Activity requires incubation with lipid activators, and may vary depending on the substrate and reaction conditions.
Purity	Greater than 90% as determined by SDS-PAGE.
Formulation	PKC-γ is supplied at a of 0.1mg/ml in 10mM Tris, pH 7.4, 0.1M NaCl, 20% glycerol, 1mM DTT, 0.1mM EDTA, 0.2mM PMSF and 0.03% Brij-35.
Storage	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles.
GENE INFORMATION	
Gene Name	PRKCG protein kinase C, gamma [Homo sapiens]
Synonyms	PRKCG; protein kinase C, gamma; PKCG; SCA14; MGC57564; PKC-gamma;Protein kinase C gamma type;EC2.7.11.13
Gene ID	5582
mRNA Refseq	NM_002739
Protein Refseq	NP_002730
UniProt ID	P05129

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MIM	176980
Chromosome Location	19q13.4
Pathway	Calcium signaling pathway; ErbB signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; Gap junction; Glioma; Leukocyte transendothelial migration; Long-term depression; Long-term potentiation; MAPK signaling pathway; Melanogenesis; Natural killer cell mediated cytotoxicity; Non-small cell lung cancer; Non-small cell lung cancer; Phosphatidylinositol signaling system; Tight junction; Vascular smooth muscle contraction; Vibrio cholerae infection; Wnt signaling pathway; Synaptic Transmission; Hemostasis
Function	ATP binding; calcium ion binding; nucleotide binding; protein kinase C activity; transferase activity; zinc ion binding
PDB rendering based on 1tbn.	