PRKCZ Protein, Human (Sf9, GST)

Cat. No.:	HY-P701755
Synonyms:	PRKCZ; Protein kinase C zeta type; nPKC-zeta
Species:	Human
Source:	Sf9 insect cells
Accession:	Q05513-1 (P2-V592)
Gene ID:	5590
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	PKCz, a calcium- and diacylglycerol-independent serine/threonine-protein kinase, plays a multifaceted role in cellular processes, acting within the phosphatidylinositol 3-kinase (PI3K) pathway and mitogen-activated protein (MAP) kinase cascade. Involved in diverse functions such as NF-kappa-B activation, mitogenic signaling, cell proliferation, cell polarity, inflammatory response, and the maintenance of long-term potentiation (LTP), PKCz exhibits versatility in its cellular functions. In various contexts, it functions downstream of PI3K, independently activating the MAP2K1/MEK1-MAPK1/ERK2 signaling cascade, contributing to insulin-dependent activation of AKT3, and participating in the transactivation of NF-kappa-B. Additionally, PKCz plays a role in the establishment of cell polarity, stimulates neuronal differentiation, and is implicated in the development of allergic airway inflammation (asthma) through its involvement in Th2 immune response. Furthermore, PKCz is crucial in the late synaptic long-term potentiation phase in CA1 hippocampal cells and is associated with long-term memory maintenance.

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