

Protein Kinase D2/PRKD2 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P74615
Synonyms:	Serine/threonine-protein kinase D2; PRKD2; PKD2; HSPC187
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9BZL6-1 (M1-L878)
Gene ID:	25865
Molecular Weight:	Approximately 120 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 500 mM NaCl, 0.5 mM PMSF, 10% glycerol, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	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	Protein Kinase D2 (PRKD2), a serine/threonine-protein kinase, acts as a pivotal mediator of diverse cellular processes. It translates transient diacylglycerol (DAG) signals into sustained physiological effects downstream of PKC, influencing cell proliferation through MAPK1/3 (ERK1/2) signaling, oxidative stress-induced NF-kappa-B activation, inhibition of HDAC7 transcriptional repression, T-cell antigen receptor (TCR) and cytokine production, Golgi membrane trafficking, angiogenesis, secretory granule release, and cell adhesion. PRKD2 may enhance mitogenesis induced by neuropeptide bombesin by prolonging MAPK1/3 signaling, leading to the accumulation of immediate-early gene products, including FOS, promoting cell cycle progression. Phosphorylation of PRKD2 at Tyr-438 and Tyr-717 by ABL1 in response to oxidative stress activates NF-kappa-B. Additionally, PRKD2, in response to gastrin receptor CCKBR activation, phosphorylates HDAC7, inhibiting its transcriptional repression of NR4A1/NUR77. The kinase also plays essential roles in T-cell activation, angiogenesis, secretion, and tumor growth, demonstrating its multifaceted involvement in cellular functions.
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Caution: Product has not been fully validated for medical applications. For research use only.

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