

PKD2, Active recombinant protein
PKD, [Pyruvate dehydrogenase [lipoamide]] kinase isozyme 2
Catalog # PBV11287r

Specification

PKD2, Active recombinant protein - Product info

Primary Accession	Q13563
Concentration	0.1
Calculated MW	~130.0 kDa KDa

PKD2, Active recombinant protein - Additional Info

Gene ID	5311
Gene Symbol	PKD2
Other Names	
PKD, [Pyruvate dehydrogenase [lipoamide]] kinase isozyme 2	
Source	Baculovirus (Sf9 insect cells)
Assay&Purity	SDS-PAGE; ≥80%
Assay2&Purity2	HPLC;
Recombinant	Yes
Format	
Liquid	

Storage

-80°C; 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).

PKD2, Active recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PKD2, Active recombinant protein - Images

PKD2, Active recombinant protein - Background

PKD2 is a novel phorbol ester- and growth factor-stimulated serine/threonine kinase that contains two cysteine-rich motifs at the N terminus, a pleckstrin homology domain, and a catalytic domain (1). It exhibits the strongest homology to the serine/threonine protein kinases PKD/PKCmu and PKCnu, particularly in the duplex zinc finger-like cysteine-rich motif, in the pleckstrin homology

domain and in the protein kinase domain. The PKD family of enzymes have been implicated in very diverse cellular functions, including Golgi organization and plasma membrane directed transport, metastasis, immune responses, apoptosis and cell proliferation (2). PKD2 can be activated by phorbol esters both in vivo and in vitro but also by gastrin via the cholecystokinin/CCK(B) receptor in human gastric cancer cells stably transfected with the CCK(B)/gastrin receptor (AGS-B cells) (3). Gastrin-stimulated PKD2 activation involves a heterotrimeric G $\alpha(q)$ protein as well as the activation of phospholipase C. Furthermore, PKD2 can be activated by classical and novel members of the protein kinase C (PKC) family such as PKC α , PKC epsilon, and PKC eta implicating PKD2 to be a downstream target of specific PKCs upon the stimulation of AGS-B cells with gastrin. PKD2 is predominantly cytoplasmic and stimulation of cells with the G protein-coupled receptor agonist neurotensin induces a rapid and reversible plasma membrane translocation of PKD2 by a mechanism that requires PKC activity (4). In contrast to the other PKD isoenzymes, PKD2 activation does not induce its redistribution from the cytoplasm to the nucleus.

PKD2, Active recombinant protein - References

- Mochizuki T., et al. Science 272:1339-1342(1996).
Hayashi T., et al. Genomics 44:131-136(1997).
Schneider M.C., et al. Genomics 38:1-4(1996).
Lehtonen S., et al. J. Biol. Chem. 275:32888-32893(2000).
Gallagher A.R., et al. Proc. Natl. Acad. Sci. U.S.A. 97:4017-4022(2000).