Active PKD2

CATALOG #: 7711-5

SOURCE: Sf 9 cells

PURITY: 1 µg of PKD2 protein was subjected to SDS-PAGE and Coomassie blue staining. The scan of the gel showed >80% purity of the PKD2 product, and the band was at ~130 kDa.

SPECIFIC ACTIVITY: 259 nmol/min/mg

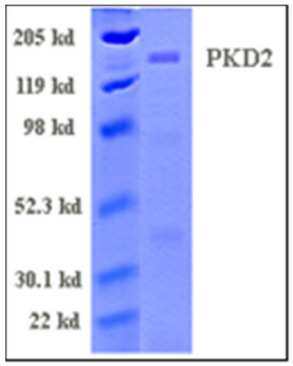
MOLECULAR WEIGHT: ~130 kDa.

FORMULATION: 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).

STORAGE CONDITIONS: 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: 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. 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.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). 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 alpha, 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. In contrast to the other PKD isoenzymes, PKD2 activation does not induce its redistribution from the cytoplasm to the nucleus.

ACTIVITY: 259 nmol phosphate incorporated into CREBtide substrate peptide per minute per mg protein at 30°C for 15 minutes using a final concentration of 50 µM ATP (0.83 µCi/assay).



PKD2 Protein Gel

RELATED PRODUCTS:

- Active PKC iota **(Cat. No. 7705-5)**
- Active PKC epsilon **(Cat. No. 7753-5)**
- Active PKC eta **(Cat. No. 7731-5)**
- Active PKC mu **(Cat. No. 7745-5)**
- Active PKC a **(Cat. No. 7714-5)**
- Active PKC zeta **(Cat. No. 7718-5)**
- Active PKC gamma **(Cat. No. 7764-5)**
- Active PKC βII **(Cat. No. 7704-5)**

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