

#5655 Store at -20C

## PKD3/PKCv (D57E6) Rabbit mAb



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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| WB, IP        | H M R Mk B  | Endogenous   | 110       | Rabbit IgG      | #O94806     | 23683           |

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

PKD3/PKCv (D57E6) Rabbit mAb recognizes endogenous levels of total PKD3/PKCv protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala880 of human PKD3/PKCv protein.

### Background

PKCv, also known as PKD3, is a member of the protein kinase C (PKC) family of serine/threonine kinases that play critical roles in the regulation of cellular differentiation and proliferation. PKCv is composed of 890 amino acid residues and has 77.3% similarity to human PKC $\mu$  (PKC $\mu$ ) and 77.4% similarity to mouse PKD (the mouse homolog of PKC $\mu$ ) (1). The PKCv mRNA is ubiquitously expressed in various tissues. PKCv has two putative diacylglycerol binding C1 domains, suggesting that it may participate in a novel diacylglycerol-mediated signaling pathway (2). PKCv is translocated to the plasma membrane and activated by the diacylglycerol mimic phorbol 12-myristate 13-acetate. PKCv is an important physiologic target of the B-cell receptor (BCR) and exhibits robust activation after BCR engagement (2). GPCR agonists induce a rapid activation of PKCv by a protein kinase C (PKC)-dependent pathway that leads to the phosphorylation of the activation loop of PKCv. PKCv is present both in the nucleus and cytoplasm and this distribution of PKCv results from its continuous shuttling between both compartments by a mechanism that requires a nuclear import receptor and a competent CRM1-nuclear export pathway (3). Cell stimulation with the GPCR agonist neurotensin induces a rapid and reversible plasma membrane translocation of PKCv that is PKC-dependent.

### Background References

- Hayashi, A. et al. (1999) *Biochim. Biophys. Acta.* 1450, 99-106.
- Matthews, S.A. et al. (2003) *J. Biol. Chem.* 278, 9086-91.
- Rey, O. et al. (2003) *J. Biol. Chem.* 278, 23773-85.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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