



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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## Phospho-PKD/PKC $\mu$ (Ser744/748) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W, W-S	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 115	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q15139	<b>Entrez-Gene Id:</b> 5587
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### Product Usage Information

#### Application

Western Blotting  
Simple Western™

#### Dilution

1:1000  
1:50 - 1:250

### Storage

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

### Specificity/Sensitivity

Phospho-PKD/PKC $\mu$  (Ser744/748) Antibody detects PKD1/PKC $\mu$  only when dually phosphorylated at serines 744 and 748. This antibody may also cross-react with isoforms PKD2 and PKD3/PKC $\eta$  in some species.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser744/748 of mouse PKD. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Activation of PKC is one of the earliest events in a cascade leading to a variety of cellular responses, such as secretion, gene expression, proliferation, and muscle contraction (1,2). Protein kinase D (PKD), also called PKC $\mu$ , is a serine/threonine kinase whose activation is dependent on the phosphorylation of two activation loop sites, Ser744 and Ser748, via a PKC-dependent signaling pathway (3-5). In addition to the two activation loop sites, the carboxy-terminal Ser916 has been identified as an autophosphorylation site for PKD/PKC $\mu$ . Phosphorylation at Ser916 correlates with PKD/PKC $\mu$  catalytic activity (6).

### Background References

1. Nishizuka, Y. (1984) *Nature* 308, 693-698.
2. Keranen, L.M. (1995) *Curr. Biol.* 5, 1394-1403.
3. Valverde, A.M. et al. (1994) *Proc. Natl. Acad. Sci.* 91, 8572-8576.
4. Johannes, F.J. et al. (1994) *J. Biol. Chem.* 269, 6140-6148.
5. Iglesias, T. et al. (1998) *J. Biol. Chem.* 273, 27662-27667.
6. Matthews, S.A. et al. (1999) *J. Biol. Chem.* 274, 26543-26549.
7. Wood, C.D. et al. (2005) *J Biol Chem* 280, 6245-51.
8. Amadesi, S. et al. (2009) *J Comp Neurol* 516, 141-56.

### 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

**W:** Western Blotting **W-S:** Simple Western™

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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