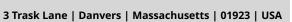
| PKCζ (C24E6) Rabbit mAb | | Cell Signaling | | |
|-------------------------|--------|--|--|--|
| | Orders | : 877-616-CELL (2355) orders@cellsignal.com | | |
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For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: W | Reactivity: H M R Mk | Sensitivity: Endogenous | MW (kDa): 78 | Source/Isotype: Rabbit IgG | UniProt ID: #Q05513 | Entrez-Gene Id: 5590 | | |
|------------------------------|--|---|--|--|-------------------------------|-------------------------|--|--|
| Product Usage Information | 2 | ApplicationDilutionWestern Blotting1:1000 | | | | | | |
| 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. | | | | ol and less than | | |
| Specificity/Sensitivity | | PKCζ (C24E6) Rabbit mAb detects endogenous levels of total PKCζ. The antibody does not cross-react with other PKC isoforms. | | | | | | |
| Source / Purifi | Irification Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to human PKCζ. | | prresponding to | | | | | |
| Background | | Activation of protein kinase C (PKC) is one of the earliest events in a cascade that controls a variety of cellular responses, including secretion, gene expression, proliferation, and muscle contraction (1,2). PKC isoforms belong to three groups based on calcium dependency and activators. Classical PKCs are calcium-dependent via their C2 domains and are activated by phosphatidylserine (PS), diacylglycerol (DAG), and phorbol esters (TPA, PMA) through their cysteine-rich C1 domains. Both novel and atypical PKCs are calcium-independent, but only novel PKCs are activated by PS, DAG, and phorbol esters (3-5). Members of these three PKC groups contain a pseudo-substrate or autoinhibitory domain that binds to substrate-binding sites in the catalytic domain to prevent activation in the absence of cofactors or activators. Control of PKC activity is regulated through three distinct phosphorylation events. Phosphorylation occurs <i>in vivo</i> at Thr500 in the activation loop, at Thr641 through autophosphorylation, and at the carboxy-terminal hydrophobic site Ser660 (2). Atypical PKC isoforms lack hydrophobic region phosphorylation, which correlates with the presence of glutamic acid rather than the serine or threonine residues found in more typical PKC isoforms. The enzyme PDK1 or a close relative is responsible for PKC activation. A recent addition to the PKC superfamily is PKCµ (PKD), which is regulated by DAG and TPA through its C1 domain. PKD is distinguished by the presence of a PH domain and by its unique substrate recognition and Golgi localization (6). PKC-related kinases (PRK) lack the C1 domain and do not respond to DAG or phorbol esters. Phosphatidylinositol lipids activate PRKs, and small Rho-family GTPases bind to the homology region 1 (HR1) to regulate PRK kinase activity (7). | | | | | | |
| Background R | eferences | 2. Keranen, L.M. et al. 3. Mellor, H. and Parke 4. Ron, D. and Kazanie 5. Moscat, J. and Diaz- 6. Baron, C.L. and Mal | shizuka, Y. (1984) <i>Nature</i> 308, 693-8. ranen, L.M. et al. (1995) <i>Curr Biol</i> 5, 1394-403. Illor, H. and Parker, P.J. (1998) <i>Biochem J</i> 332 (Pt 2), 281-92. n, D. and Kazanietz, M.G. (1999) <i>FASEB J</i> 13, 1658-76. Iscat, J. and Diaz-Meco, M.T. (2000) <i>EMBO Rep</i> 1, 399-403. ron, C.L. and Malhotra, V. (2002) <i>Science</i> 295, 325-8. nn, P. et al. (2000) <i>J Biol Chem</i> 275, 11064-70. | | | | | |
| Species Reacti | vity | Species reactivity is de | etermined by testin | g in at least one approve | ed application (e.g., | western blot). | | |
| Western Blot E | Buffer | IMPORTANT: For west TBS, 0.1% Tween® 20 | | e membrane with diluted primary antibody in 5% w/v BSA, 1X shaking, overnight. | | | | |
| Applications K | ey | W: Western Blotting | | | | | | |
| Cross-Reactivi | ty Key | H: Human M: Mouse R: Rat Mk: Monkey | | | | | | |
| Trademarks ar | nd Patents | 0 0 | | emark of Cell Signaling Technology, Inc. equivalents, and child patents deriving therefrom. | | | | |

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