

# p-PKC $\beta$ II/ $\delta$ (Ser 660): sc-11760

## BACKGROUND

Members of the protein kinase C (PKC) family play a key regulatory role in a variety of cellular functions, including cell growth and differentiation, gene expression, hormone secretion and membrane function. PKCs were originally identified as serine/threonine protein kinases whose activity was dependent on calcium and phospholipids. Diacylglycerols (DAG) and tumor promoting phorbol esters bind to and activate PKC. PKCs can be subdivided into at least two major classes, including conventional (c) PKC isoforms ( $\alpha$ ,  $\beta$ I,  $\beta$ II and  $\gamma$ ) and novel (n) PKC isoforms ( $\delta$ ,  $\epsilon$ ,  $\zeta$ ,  $\eta$  and  $\theta$ ). Patterns of expression for each PKC isoform differ among tissues and PKC family members exhibit clear differences in their cofactor dependencies. For instance, the kinase activities of nPKC  $\delta$  and  $\epsilon$  are independent of  $\text{Ca}^{2+}$ . On the other hand, nPKC  $\delta$  and  $\epsilon$ , as well as all of the cPKC members, possess phorbol ester-binding activities and kinase activities.

## CHROMOSOMAL LOCATION

Genetic locus: PRKCB (human) mapping to 16p12.2, PRKCD (human) mapping to 3p21.1; Prkcb (mouse) mapping to 7 F3, Prkcd (mouse) mapping to 14 B.

## SOURCE

p-PKC  $\beta$ II/ $\delta$  (Ser 660) is available as either goat (sc-11760) or rabbit (sc-11760-R) polyclonal antibody raised against a short amino acid sequence containing Ser 660 phosphorylated PKC  $\beta$ II of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11760 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-PKC  $\beta$ II/ $\delta$  (Ser 660) is recommended for detection of Ser 660 phosphorylated PKC  $\beta$ II of mouse, rat and human origin, correspondingly Ser 662 phosphorylated PKC  $\delta$  of mouse and rat origin, and correspondingly Ser 664 phosphorylated PKC  $\delta$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of p-PKC  $\beta$ II: 80 kDa.

Molecular Weight of p-PKC  $\delta$ : 78 kDa.

Positive Controls: U-937 cell lysate: sc-2239.

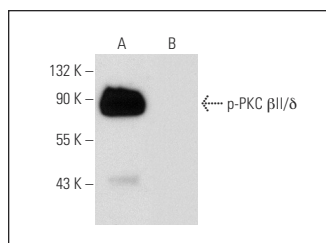
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

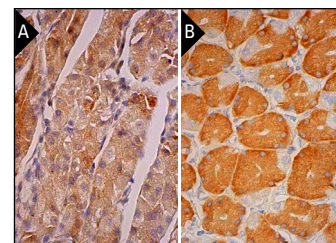
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



p-PKC  $\beta$ II/ $\delta$  (Ser 660)-R: sc-11760-R. Western blot analysis of PKC  $\beta$ II/ $\delta$  phosphorylation in untreated (A) and lambda protein phosphatase treated (B) U-937 whole cell lysates.



p-PKC  $\beta$ II/ $\delta$  (Ser 660): sc-11760. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Bandyopadhyay, G., et al. 2004. Chlorogenic acid inhibits Bcr-Abl tyrosine kinase and triggers p38 mitogen-activated protein kinase-dependent apoptosis in chronic myelogenous leukemic cells. *Blood* 104: 2514-2522.
2. Guzman, M.L., et al. 2007. Rapid and selective death of leukemia stem and progenitor cells induced by the compound 4-benzyl, 2-methyl, 1,2,4-thiadiazolidine, 3,5 dione (TDZD-8). *Blood* 110: 4436-4444.
3. Yadav, U.C., et al. 2009. Prevention of endotoxin-induced uveitis in rats by benfotiamine, a lipophilic analogue of vitamin B1. *Invest. Ophthalmol. Vis. Sci.* 50: 2276-2282.
4. Duan, Y., et al. 2013. miR-150 regulates high glucose-induced cardiomyocyte hypertrophy by targeting the transcriptional co-activator p300. *Exp. Cell Res.* 319: 173-184.
5. Fu, L., et al. 2015. Circulating microparticles from patients with valvular heart disease and cardiac surgery inhibit endothelium-dependent vasodilation. *J. Thorac. Cardiovasc. Surg.* 150: 666-672.

## PROTOCOLS

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