



Rabbit Anti-Phospho-PKC alpha (Thr638) antibody

SL3333R

Product Name:	Phospho-PKC alpha (Thr638)
Chinese Name:	磷酸化蛋白激酶C α/β 2抗体
Alias:	PKC alpha (phospho T638); Phospho-PKC beta II (Thr641); PKC(Phospho-Thr641); Phospho-PKC alpha/beta II (Thr638/641); Phospho-PKC alpha/beta II (Thr638+641); PKC alpha; AAG6; Aging associated gene 6; PICK 1; PKC A; PKC alpha; PKCA; PRKACA; PRKC A; PRKCA; Protein Kinase C alpha; Protein kinase C alpha type; KPCB_HUMAN; PKC α .
文献引用 	Specific References(2) SL3333R has been referenced in 2 publications. [IF=3.31]Król, Magdalena, et al. "Macrophages Mediate a Switch between Canonical and Non-Canonical Wnt Pathways in Canine Mammary Tumors." PloS one 9.1 (2014): e83995. WB;Dog. PubMed:24404146 [IF=10.82]Edens, Lisa J., and Daniel L. Levy. "cPKC regulates interphase nuclear size during Xenopus development." The Journal of Cell Biology 206.4 (2014): 473-483. IF(ICC);Others. PubMed:25135933
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Horse,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	77kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane

Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human PKC alpha around the phosphorylation site of Thr638:VL(p-T)PP
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>Protein Kinase c alpha (PKC alpha) is an 77 kDa member of the conventional group (cPKCs: sensitive to calcium, diacylglycerol, phosphatidylserine and phorbol esters) of the PKC family of serine/ threonine kinases that are involved in a wide range of physiological processes including mitogenesis, cell survival and transcriptional regulation. PKC alpha is an ubiquitously expressed PKC isozyme that has been implicated in the regulation of a broad range of cellular functions including proliferation, differentiation, development, migration, cell cell adhesion, cell extracellular matrix adhesion, and solute transport. The activation loop threonine (threonine 497 in PKC alpha) of conventional PKCs is phosphorylated by phosphoinositide dependent kinase 1 (PDK1). This phosphorylation is necessary for the autophosphorylation of threonine 638 in the carboxy terminus of PKC alpha, a step that is critical for regulating the rate of PKC alpha dephosphorylation and inactivation.</p> <p>Function: Calcium-activated, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase involved in various cellular processes such as regulation of the B-cell receptor (BCR) signalosome, oxidative stress-induced apoptosis, androgen receptor-dependent transcription regulation, insulin signaling and endothelial cells proliferation. Plays a key role in B-cell activation by regulating BCR-induced NF-kappa-B activation. Mediates the activation of the canonical NF-kappa-B pathway (NFkB1) by direct phosphorylation of CARD11/CARMA1 at 'Ser-559', 'Ser-644' and 'Ser-652'. Phosphorylation induces CARD11/CARMA1 association with lipid rafts and recruitment of the BCL10-MALT1 complex as well as MAP3K7/TAK1, which then activates IKK complex, resulting in nuclear translocation and activation of NFkB1. Plays a direct role in the negative feedback regulation of the BCR signaling, by down-modulating BTK function via direct phosphorylation of BTK at 'Ser-180', which results in the alteration of BTK plasma membrane localization and in turn inhibition of BTK activity. Involved in apoptosis following oxidative damage: in case of oxidative conditions, specifically phosphorylates 'Ser-36' of isoform p66Shc of SHC1, leading to mitochondrial accumulation of p66Shc, where p66Shc acts as a reactive oxygen species producer. Acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and specifically mediating phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag for epigenetic transcriptional activation that prevents demethylation of histone H3 'Lys-4' (H3K4me) by LSD1/KDM1A. In</p>

insulin signaling, may function downstream of IRS1 in muscle cells and mediate insulin-dependent DNA synthesis through the RAF1-MAPK/ERK signaling cascade. May participate in the regulation of glucose transport in adipocytes by negatively modulating the insulin-stimulated translocation of the glucose transporter SLC2A4/GLUT4. Under high glucose in pancreatic beta-cells, is probably involved in the inhibition of the insulin gene transcription, via regulation of MYC expression. In endothelial cells, activation of PRKCB induces increased phosphorylation of RB1, increased VEGFA-induced cell proliferation, and inhibits PI3K/AKT-dependent nitric oxide synthase (NOS3/eNOS) regulation by insulin, which causes endothelial dysfunction. Also involved in triglyceride homeostasis.

Subunit:

Recruited in a circadian manner into a nuclear complex which also includes BMAL1 and GNB2L1/RACK1 (By similarity). Interacts with ADAP1/CENTA1, CSPG4 and PRKCABP. Binds to SDPR in the presence of phosphatidylserine. Interacts with PICK1 (via PDZ domain). Interacts with TRIM41.

Subcellular Location:

Cytoplasm. Cell membrane; Peripheral membrane protein. Mitochondrion membrane; Peripheral membrane protein (Probable). Nucleus.

Post-translational modifications:

Phosphorylation on Thr-500 within the activation loop renders it competent to autophosphorylate. Subsequent autophosphorylation of Thr-642 maintains catalytic competence, and autophosphorylation on Ser-661 appears to release the kinase into the cytosol. Autophosphorylation on other sites i.e. in the N-terminal and hinge regions have no effect on enzyme activity. Phosphorylation at Tyr-662 by SYK induces binding with GRB2 and contributes to the activation of MAPK/ERK signaling cascade.

Similarity:

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.

Contains 1 AGC-kinase C-terminal domain.

Contains 1 C2 domain.

Contains 2 phorbol-ester/DAG-type zinc fingers.

Contains 1 protein kinase domain.

SWISS:

P17252

Gene ID:

5578

Database links:

[Entrez Gene: 5578](#)Human

[Entrez Gene: 18750](#)Mouse

[Entrez Gene: 24680](#)Rat

[Oimim: 176960](#)Human

[SwissProt: P17252](#)Human

[SwissProt: P20444](#)Mouse

[SwissProt: P05696](#)Rat

[Unigene: 531704](#)Human

[Unigene: 708867](#)Human

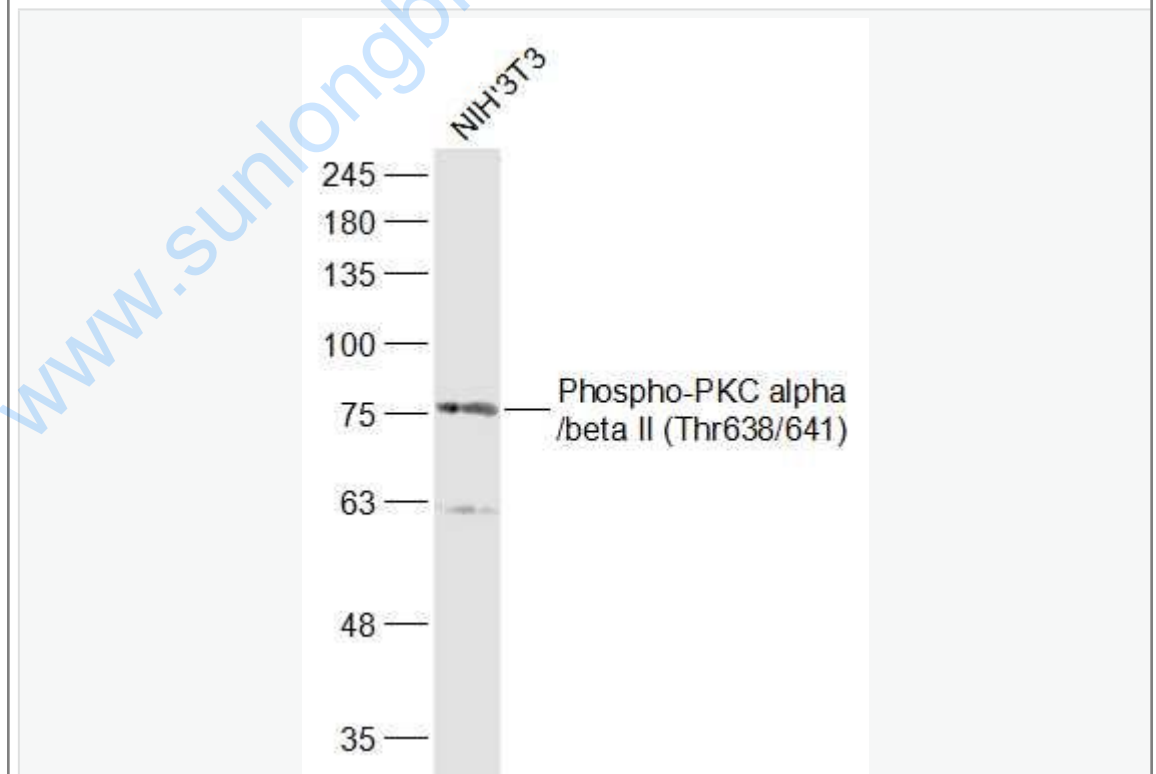
[Unigene: 222178](#)Mouse

[Unigene: 207908](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

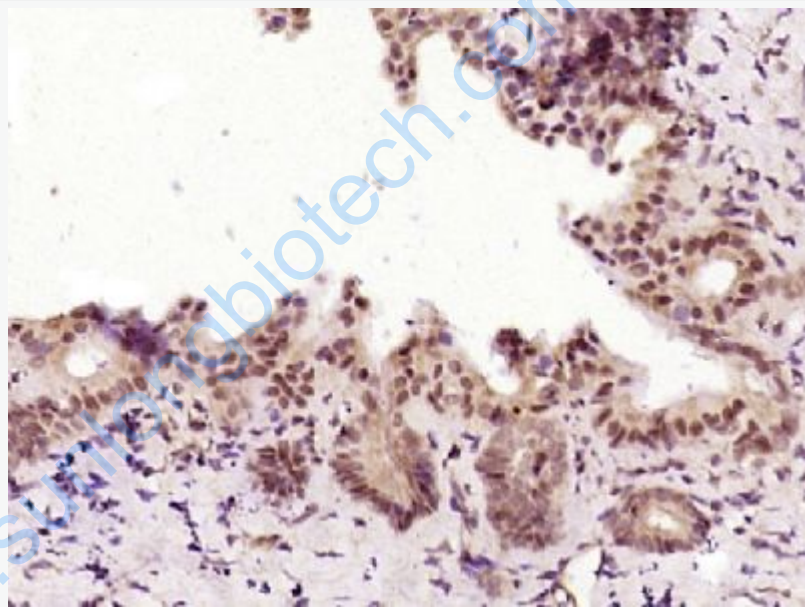
NIH/3T3(Mouse) Cell Lysate at 30 ug

Primary: Anti-Phospho-PKC alpha/beta II (Thr638/641) (SL3333R) at 1/1000 dilution

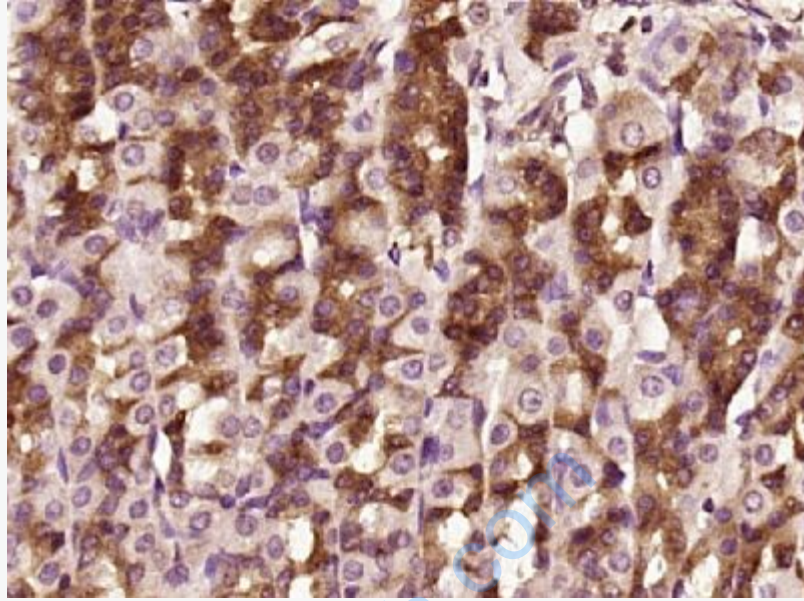
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 77 kD

Observed band size: 77 kD



Paraformaldehyde-fixed, paraffin embedded (Rat pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-PKC alpha beta II (Thr638 641)) Polyclonal Antibody, Unconjugated (SL3333R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-PKC alpha beta II (Thr638 641)) Polyclonal Antibody, Unconjugated (SL3333R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.