SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-PKA C alpha + beta antibody

Catalog Number: SL2371R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	PKA C alpha + beta
Immunogen:	KLH conjugated synthetic peptide derived from human PKA beta: 251-351/351
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Chicken,Dog,Pig,Cow)
Predicted MW.:	40/50kDa
Subcellular Location:	The nucleus cytoplasmic The cell membrane
Background:	cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP dependent protein kinase (AMPK), which transduces the signal through phosphorylation of different target proteins. The inactive holoenzyme of AMPK is a tetramer composed of two regulatory and two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits of AMPK have been identified in humans. PKA beta (catalytic subunit) is a member of the Ser/Thr protein kinase family and is a catalytic subunit of AMPK. **Function:** Mediates cAMP-dependent signaling triggered by receptor binding

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

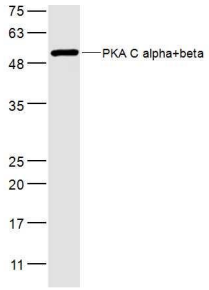
	to GPCRs. PKA activation regulates diverse cellular processes such as cell proliferation, the cell cycle, differentiation and regulation of microtubule dynamics, chromatin condensation and decondensation, nuclear envelope disassembly and reassembly, as well as regulation of intracellular transport mechanisms and ion flux. Regulates the abundance of compartmentalized pools of its regulatory subunits through phosphorylation of PJA2 which binds and ubiquitinates these subunits, leading to their subsequent proteolysis. **Subunit:** A number of inactive tetrameric holoenzymes are produced by the combination of homo- or heterodimers of the different regulatory subunits associated with two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. The cAMP-dependent protein kinase catalytic subunit binds PJA2 (By similarity). **Subcellular Location:** oplasm. Cell membrane. Nucleus (By similarity). Note=Translocates into the nucleus (monomeric catalytic subunit) (By similarity). The inactive holoenzyme is found in the cytoplasm (By similarity). **Tissue Specificity:** Isoform 1 is most abundant in the brain, with low level expression in kidney. Isoform 2 is predominantly expressed in thymus, spleen and kidney. Isoform 3 and isoform 4 are only expressed in the brain. **Post-translational modifications:** Asn-3 is partially deaminated to Asp giving rise to 2 major isoelectric variants, called CB and CA respectively (By similarity). **Similarity:** Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. cAMP subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 5566 Human **Entrez Gene:** 5567 Human **Entrez Gene:** 282322 Cow **Entrez Gene:** 282323 Cow **Entrez Gene:** 18747 Mouse **Entrez Gene:** 18749 Mouse **Entrez Gene:** 25636 Rat Omim: 176892 Human Omim: 601639 Human **SwissProt:** P17612 Human **SwissProt:** P22694 Human **SwissProt:** P05132 Mouse **SwissProt:** P05206 Mouse

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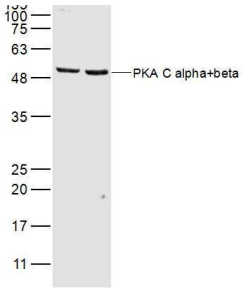
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	SwissProt: P27791 Rat **Unigene:** 391 Cow **Unigene:** 4420 Cow **Unigene:** 487325 Human **Unigene:** 631630 Human **Unigene:** 16766 Mouse **Unigene:** 19111 Mouse **Unigene:** 103828 Rat

[VALIDATION IMAGES]



Sample:
Brain(Rat) Lysate at 40 ug
Primary: Anti-PKA C alpha+beta (SL2371R) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40/50 kD
Observed band size: 50 kD



Sample:
Testis (Mouse) Lysate at 40 ug
Testis(Rat) Lysate at 40 ug
Primary: Anti-PKA C alpha+beta (SL2371R) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40/50 kD
Observed band size: 50 kD

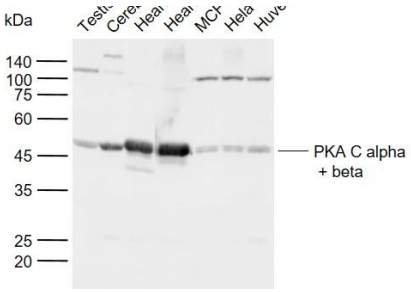
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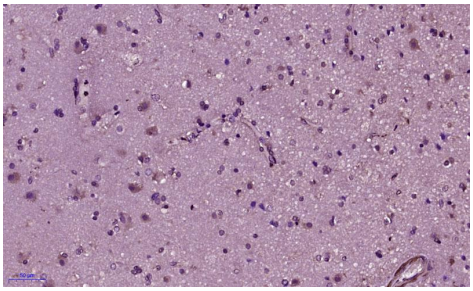
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Sample:
Lane 1: Mouse Testis tissue lysates
Lane 2: Mouse Cerebrum tissue lysates
Lane 3: Mouse Heart tissue lysates
Lane 4: Rat Heart tissue lysates
Lane 5: Human MCF-7 cell lysates
Lane 6: Human Hela cell lysates
Lane 7: Human Huvec cell lysates
Primary: Anti- PKA C alpha + beta (SL2371R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40/50kD kDa
Observed band size: 50kD kDa

Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); 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 (PKA C alpha+beta) Polyclonal Antibody, Unconjugated (SL2371R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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