

**Product Name: PKA $\alpha$ / $\beta$  cat Rabbit Polyclonal Antibody****Catalog #: APRab16185**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:10000-1:20000
<b>Molecular Weight</b>	38kDa

**Antigen Information**

<b>Gene Name</b>	PRKACA/PRKACB
<b>Alternative Names</b>	PRKACA; PKACA; cAMP-dependent protein kinase catalytic subunit alpha; PKA C-alpha; PRKACB; cAMP-dependent protein kinase catalytic subunit beta; PKA C-beta
<b>Gene ID</b>	5566/5567
<b>SwissProt ID</b>	P17612/P22694
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human KAPC A/B. AA range:1-50

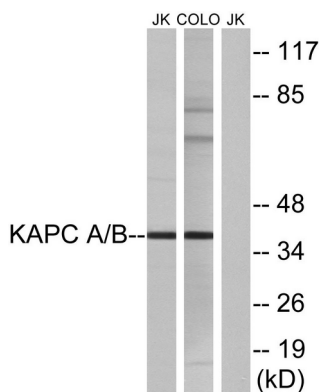
**Background**

This gene encodes one of the catalytic subunits of protein kinase A, which exists as a tetrameric holoenzyme with two regulatory subunits and two catalytic subunits, in its inactive form. 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 have been identified in humans. cAMP-dependent phosphorylation of proteins by protein kinase A is important to many cellular processes, including differentiation, proliferation, and apoptosis. Constitutive activation of this gene caused either by somatic mutations, or genomic duplications of regions that include this gene, have been associated with hyperplasias and adenomas of the adrenal cortex and are linked to corticotropin-independent Cushing's syndrome. Alternacatalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Activated by cAMP.,function:Phosphorylates a large number of substrates in the cytoplasm and the nucleus.,PTM:Asn-3 is partially deaminated to Asp giving rise to 2 major isoelectric variants, called CB and CA respectively.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. cAMP subfamily.,similarity:Contains 1 AGC-kinase C-terminal domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Translocates into the nucleus (monomeric catalytic subunit) (By similarity). The inactive holoenzyme is found in the cytoplasm.,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.,tissue specificity:Isoform 2 is sperm specific.,

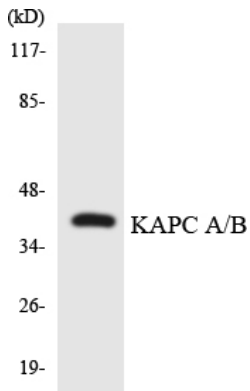
## Research Area

MAPK\_ERK\_Growth;MAPK\_G\_Protein;Calcium;Chemokine;Oocyte meiosis;Apoptosis\_Inhibition;Apoptosis\_Mitochondrial;Apoptosis\_Overview;Vascular smooth muscle contraction;WNT;WNT-T CELLHedgehog;Gap junction;Long-term potentiation;Olfactory transduction;Taste transduction;Insulin\_Receptor;GnRH;Progesterone-mediated oocyte maturation;Melanogenesis;Prion diseases;Vibrio cholerae infection;Dilated cardiomyopathy;

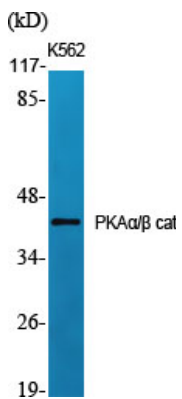
## Image Data



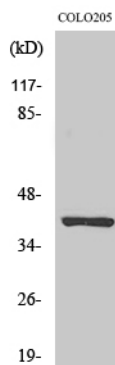
Western blot analysis of lysates from COLO and Jurkat cells, using KAPC A/B Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from RAW264.7 cells using KAPC A/B antibody.



Western Blot analysis of various cells using PKA $\alpha$ / $\beta$  cat Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of Jurkat cells using PKA $\alpha$ / $\beta$  cat Polyclonal Antibody diluted at 1: 1000