

PKA $\alpha/\beta/\gamma$ Rabbit pAb

CatalogNo: YT3749

Orthogonal Validated 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat, Pig

Applications

- WB, IHC, IF, ELISA

MW

- 40kD (Observed)

Isotype

- IgG

Recommended Dilution Ratios

WB 1:500-1:2000**IHC 1:100-1:300****IF 1:200-1:1000****ELISA 1:20000****Not yet tested in other applications.**

Storage

Storage*

-15°C to -25°C/1 year (Do not lower than -25°C)

Formulation

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality

Polyclonal

Immunogen Information

Immunogen

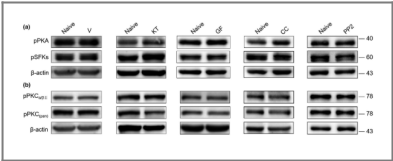
The antiserum was produced against synthesized peptide derived from human PKA alpha/beta CAT. AA range: 166-215

SpecificityPKA $\alpha/\beta/\gamma$ cat Polyclonal Antibody detects endogenous levels of PKA $\alpha/\beta/\gamma$ cat protein.

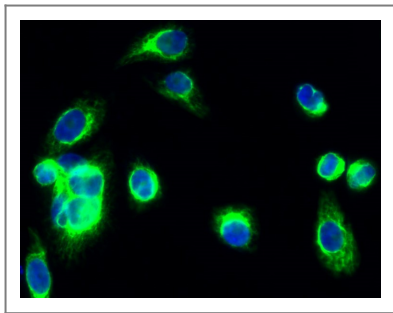
Target Information

Gene name	PRKACA/PRKACB		
Protein Name	cAMP-dependent protein kinase catalytic subunit alpha/beta		
	Organism	Gene ID	UniProt ID
	Human	5566 ; 5567 ;	P17612 ; P22694 ; P22612 ;
	Mouse	18747 ; 18749 ;	
	Rat	293508 ;	P27791 ; P68182 ;
Cellular Localization	Cytoplasm. Cell membrane. Nucleus . Mitochondrion . Membrane ; Lipid-anchor . Translocates into the nucleus (monomeric catalytic subunit). The inactive holoenzyme is found in the cytoplasm. Distributed throughout the cytoplasm in meiotically incompetent oocytes. Associated to mitochondrion as meiotic competence is acquired. Aggregates around the germinal vesicles (GV) at the immature GV stage oocytes (By similarity). Colocalizes with HSF1 in nuclear stress bodies (nSBs) upon heat shock (PubMed:21085490). .; [Isoform 2]: Cell projection, cilium, flagellum . Cytoplasmic vesicle, secretory vesicle, acrosome . Expressed in the midpiece region of the sperm flagellum (PubMed:10906071). Colocalizes with MROH2B and TCP11 on the acrosome and tail regions in round spermatids and spermatozoa regardless of the capacitation status of the sperm (By similarity). .		
Tissue specificity	Isoform 1 is ubiquitous. Isoform 2 is sperm-specific and is enriched in pachytene spermatocytes but is not detected in round spermatids.		
Function	Catalytic 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.,		

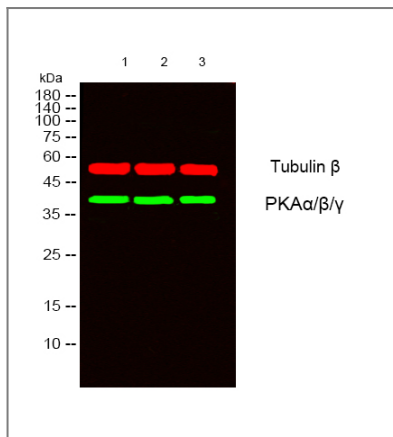
Validation Data



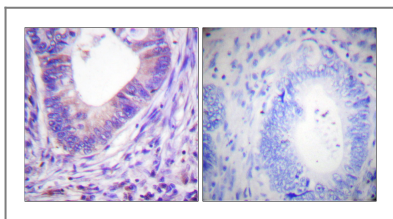
Sun, Xiao-Dong, et al. "Regulation of the firing activity by PKA-PKC-Src family kinases in cultured neurons of hypothalamic arcuate nucleus." Journal of neuroscience research 98.2 (2020): 384-403.



Immunofluorescence analysis of HeLa cell. 1, PKA $\alpha/\beta/\gamma$ cat Polyclonal Antibody (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 488 Catalog: RS3211 was diluted at 1:1000 (room temperature, 50min). 3 DAPI (blue) 10min.



Western blot analysis of lysates from 1) 22RV1, 2) HeLa, 3) COLO205 cells, (Green) primary antibody was diluted at 1:1000, 4° overnight, secondary antibody (cat: RS23920) was diluted at 1:10000, 37° 1 hour. (Red) Tubulin β Monoclonal Antibody (5G3) (cat: YM3030) antibody was diluted at 1:5000 as loading control, 4° overnight, secondary antibody (cat: RS23710) was diluted at 1:10000, 37° 1 hour.



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma tissue, using PKA α/β CAT Antibody. The picture on the right is blocked with the synthesized peptide.

Contact information

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Please scan the QR code to access additional product information:
PKA $\alpha/\beta/\gamma$ Rabbit pAb

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