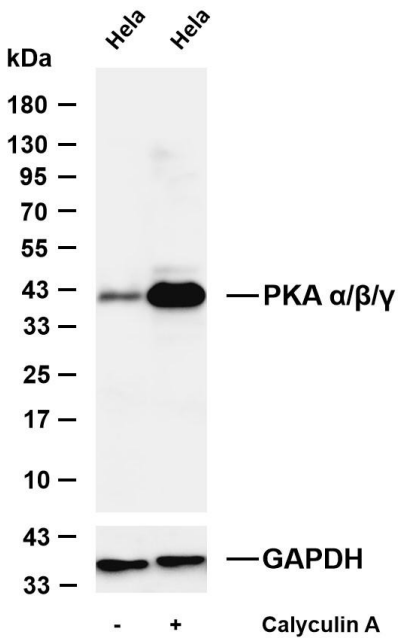
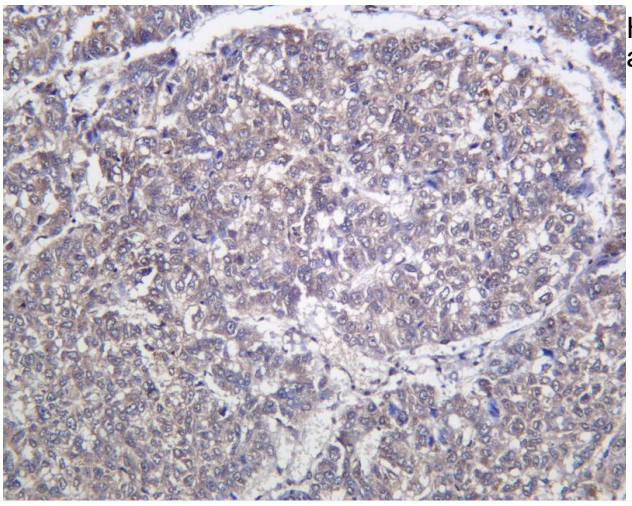
PKA α / β / γ (Phospho Thr197) Rabbit mAb

Catalog No	YP-rAb-18350
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	PRKACA/PRKACB
Protein Name	cAMP-dependent protein kinase catalytic subunit alpha/beta
Purification Process	Protein A
Specificity	Phospho-PKA α / β / γ cat (T198) Antibody detects endogenous levels of PKA α / β / γ cat protein only when phosphorylated at T198.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):TWtLC
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	PRKACA ; PKACA ; cAMP-dependent protein kinase catalytic subunit alpha ; PKA C-alpha ; PRKACB ; cAMP-dependent protein kinase catalytic subunit beta ; PKA C-beta ; PRKACG ; cAMP-dependent protein kinase catalytic subunit gamma ; PKA C-gamma
Observed Band	41kD
Calculated Molecular Weight	41kD
Cell Pathway	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

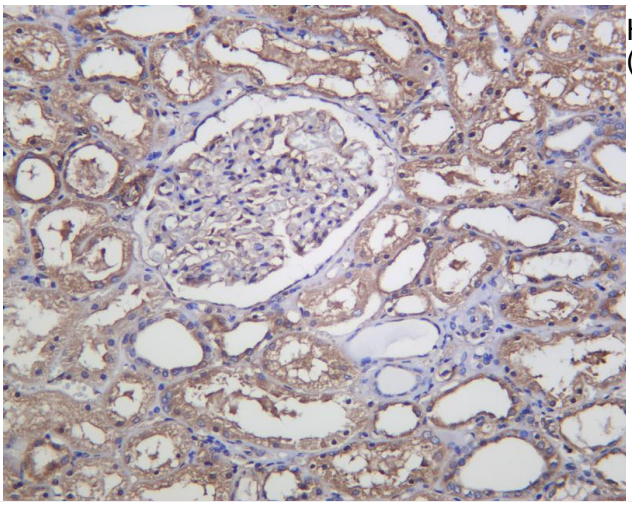
	projection, cilium, flagellum . Cytoplasmic vesicle, secretory vesicle, acrosome . Expressed in the midpiece region of the sperm flagellum (PubMed:10906071). Colocalizes with MROH2B and TCP11 on the acrosome and tail regions in round spermatids and spermatozoa regardless of the capacitation status of 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.,
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. Altern
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PKA α / β / γ (Phospho Thr197) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: Hela starved of serum overnight and then treated with 20% fetal bovine serum and Calyculin A(100 nM) for 15 minutes Predicted band size: 41kDa Observed band size: 41kDa



Human hepatocellular carcinoma was stained with anti-PKA α / β / γ (Phospho Thr197) Rabbit antibody



Human kidney was stained with anti-PKA α / β / γ (Phospho Thr197) Rabbit antibody