PKA α/β/γ (catalytic subunit) (Phospho Thr197) Rabbit pAb

CatalogNo: YP0226

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 40kD (Observed)

Isotype
- IgG

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.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
IF 1:200-1:1000
ELISA 1:10000
Not yet tested in other applications.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human PKA CAT around the phosphorylation site of Thr197. AA range:166-215

Specificity Phospho-PKAα/β/γ cat (T198) Polyclonal Antibody detects endogenous levels of PKAα/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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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

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

Contact information

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Please scan the QR code to access additional product information:
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