# PKC Alpha (PRKCA) Recombinant Protein

## PRODUCT OVERVIEW

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| **Product Name** | PKC alpha (PRKCA), Recombinant Protein |
| **Full Product Name** | PKC alpha (human), (recombinant) (GST-tag) |
| **Product Gene Name** | PRKCA recombinant protein |
| **Host** | Insect cells |
| **Preparation and Storage** | For long term storage, store at -80 degree C<br>Shipping: Shipped on Dry Ice |
| **Molecular Weight** | 76,750 Da |
| **Chromosome Location** | Chromosome: 17; NC_000017.10 (64298926..64806862). Location: 17q22-q23.2 |
| **OMIM** | 176960 |
| **3D Structure** | ModBase 3D Structure for P17252 |
| **Source Note** | Full length active PKCa (protein kinase C alpha) is fused at the N-terminus to a GST-tag. Produced in a baculovirus expression system |
| **Product Categories/Family for PRKCA recombinant protein** | Cellular Analysis; Cell Signaling; Proteostasis; Posttranslational Modifications |
| **Related Product Information for PRKCA recombinant protein** | PKCalpha is a member of the PKC family of serine- and threonine-specific protein kinases that can be activated by calcium and diacylglycerol. It has been reported to play roles in many different cellular processes, such as cell adhesion, cell transformation, cell cycle checkpoint, and cell volume control. Knockout studies in mice suggest that this kinase may be a fundamental regulator of cardiac contractility and $Ca^{2+}$ handling in myocytes. |
| **Other Notes** | Small volumes of PRKCA recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for PRKCA purchase** | MBS566669 is a recombinant protein targeting PRKCA. Also known as PKC alpha (human), (recombinant) (GST-tag). Host: Insect cells. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRKCA. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 4506067 |
| **NCBI GeneID** | 5578 |
| **NCBI Accession #** | NP_002728.1 |
| **UniProt Primary Accession #** | P17252 |
| **UniProt Secondary Accession #** | Q15137; Q32M72; Q96RE4; B5BU22 |
| **UniProt Related Accession #** | P17252 |
| **GenBank Nucleotide #** | NM_002737.2 |
| **NCBI Official Full Name** | protein kinase C alpha type |
| **NCBI Official Synonym Full Names** | protein kinase C, alpha |
| **NCBI Official Symbol** | PRKCA |

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| **NCBI Official Synonym Symbols** | AAG6; PKCA; PRKACA; PKC-alpha |
| **UniProt Protein Name** | Protein kinase C alpha type |
| **Protein Family** | Protein kinase |
| **UniProt Gene Name** | PRKCA |
| **UniProt Synonym Gene Names** | PKCA; PRKACA; PKC-A; PKC-alpha |
| **UniProt Entry Name** | KPCA_HUMAN |
| **NCBI Protein Information** | protein kinase C alpha type; PKC-A; aging-associated gene 6 |
| **NCBI Summary for PRKCA** | Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and the second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC family members also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play a distinct role in cells. The protein encoded by this gene is one of the PKC family members. This kinase has been reported to play roles in many different cellular processes, such as cell adhesion, cell transformation, cell cycle checkpoint, and cell volume control. Knockout studies in mice suggest that this kinase may be a fundamental regulator of cardiac contractility and Ca(2+) handling in myocytes. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for PRKCA** | PKCA: an AGC kinase of the PKC family. A classical PKC downstream of many mitogenic and receptors. Classical PKCs are calcium-dependent enzymes that are activated by phosphatidylserine, diacylglycerol and phorbol esters. Contains a pseudo-substrate autoinhibitory domain that binds to the catalytic domain preventing its activation in the absence of cofactors or activators.<br><br>Protein type: Oncoprotein; Protein kinase, AGC; Kinase, protein; EC 2.7.11.13; Protein kinase, Ser/Thr (non-receptor); AGC group; PKC family; Alpha subfamily<br><br>Chromosomal Location of Human Ortholog: 17q22-q23.2<br><br>Cellular Component: nucleoplasm; photoreceptor outer segment; cell soma; mitochondrion; perinuclear region of cytoplasm; endoplasmic reticulum; apical part of cell; cytoplasm; mitochondrial membrane; dendrite; plasma membrane; cytosol<br><br>Molecular Function: protein serine/threonine kinase activity; protein binding; enzyme binding; protein kinase C activity; zinc ion binding; calcium-dependent protein kinase C activity; ATP binding; protein kinase activity<br><br>Biological Process: phototransduction, visible light; extracellular matrix organization and biogenesis; positive regulation of cell adhesion; nerve growth factor receptor signaling pathway; regulation of muscle contraction; positive regulation of lipopolysaccharide-mediated signaling pathway; mitotic nuclear envelope disassembly; negative regulation of insulin receptor signaling pathway; signal transduction; positive regulation of mitotic cell cycle; protein amino acid phosphorylation; induction of positive chemotaxis; negative regulation of cell proliferation; synaptic transmission; chondrocyte differentiation; angiogenesis; positive regulation of macrophage differentiation; cell adhesion; regulation of peptidyl-tyrosine phosphorylation; regulation of the force of heart contraction; inactivation of MAPK activity; epidermal growth factor receptor signaling pathway; neutrophil chemotaxis; platelet activation; fibroblast growth factor receptor signaling pathway; positive regulation of blood vessel endothelial cell migration; adenylate cyclase activation; negative regulation of adenylate cyclase activity; cellular calcium ion homeostasis; rhodopsin mediated signaling; positive regulation of angiogenesis; negative regulation of glucose import; regulation of rhodopsin mediated signaling; phospholipase C activation; energy reserve metabolic process; innate immune response; positive regulation of endothelial cell proliferation; gene expression; mitotic cell cycle; positive regulation of protein amino acid phosphorylation; blood coagulation; vascular endothelial growth factor receptor signaling pathway; regulation of insulin secretion; positive regulation of inflammatory response; positive regulation of cell migration |
| **Research Articles on PRKCA** | **1.** VEGF and PKC promote degradation-independent protein ubiquitination of FLNB to control intracellular trafficking of HDAC7. |
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