

## PKA Catalytic $\beta$ Active Recombinant Protein

### Product Specifications

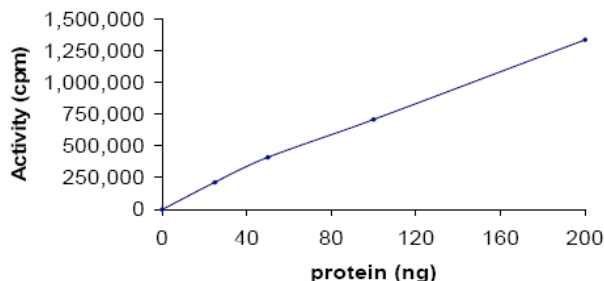
<b>Catalog Number:</b>	PPK-448
<b>Source:</b>	Human
<b>Application Notes:</b> <i>The optimal dilution for a specific application must be determined by the investigator</i>	<b>Activity Assay</b> <i>Kinase activity is measured as the molar amount of phosphate incorporated into CREBtide substrate peptide (product# SPK-102) per minute per mg protein at 30°C using a final concentration of 50 <math>\mu</math>M [<math>^{32}</math>P] ATP.</i>
<b>Molecular Weight:</b>	65 kDa
<b>Purity:</b>	>90% pure as determined by Densitometry
<b>Format:</b>	Recombinant human full length PKA Catalytic $\beta$ protein in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1mM EDTA, 0.1 mM PMSF, 25% glycerol
<b>Concentration:</b>	See product label
<b>Storage:</b> <i>Shipping conditions may differ from the recommended storage temperature</i>	Aliquot and store at -70°C (avoid repeated freeze/thaw cycles)
<b>Related Products:</b>	
EKS-390A	PKA Kinase Activity Kit
HPK-108	PKA Inhibitor 14-22 Amide, Myristoylated
KAP-PK001	PKA (NT) Polyclonal Antibody
KAS-PK017	PKA (CT) Polyclonal Antibody
PPK-447	PKA Catalytic $\alpha$ Active Recombinant Protein
PPK-463	PKA Catalytic $\gamma$ Active Recombinant Protein

### Background:

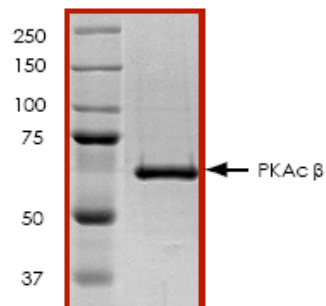
PKA belongs to the cAMP-dependent protein kinase (PKA) family. PKA isoforms type I and II include respective dimeric R subunits RI and RII which each produce two subunits designated RI- $\alpha$ , RI- $\beta$ , RII- $\alpha$ , and RII- $\beta$ . The catalytic subunit also consists of more than one gene product. Researchers cloned mammalian catalytic subunit C- $\alpha$ , C- $\beta$ , and C- $\gamma$  cDNAs. The catalytic subunit C- $\beta$  belongs to the Ser/Thr protein kinase family. Activated by cAMP, PKA C- $\beta$  resides in the cytoplasm (inactive holoenzyme and monomeric catalytic subunit), and translocates into the nucleus (monomeric catalytic subunit). A number of inactive tetrameric holoenzymes result from the combination of homo- or heterodimers of the different regulatory subunits associated with the 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. PKA C- $\beta$  acts as a p75 neurotrophin receptor (NTR)-interacting protein, which phosphorylates p75 (NTR) at Ser304<sup>1-2</sup>.

#### References:

1. Berube, D., *et al.* (1991) *Cytogenet Cell Genet.* **58**, 1850.
2. Simard, J., *et al.* (1992) *Hum Genet.* **88**, 653-657.



The specific activity of PKAc- $\beta$  was determined to be 342 nmol/min/mg as per activity assay protocol.



The purity was >90% as determined by densitometry. Approx. m.w. 65 kDa

**FOR RESEARCH USE ONLY; NOT FOR THERAPEUTIC OR DIAGNOSTIC USE**

5777 Hines Drive • Ann Arbor, MI • 48108 | Tel: 800-833-8651 or 800-668-6113 | Fax: 734-668-2793  
[www.assaydesigns.com](http://www.assaydesigns.com) | [orders@assaydesigns.com](mailto:orders@assaydesigns.com) | [technical@assaydesigns.com](mailto:technical@assaydesigns.com)

Last Revised: 7/30/08