

## Human PRKAR1A - Purified

<b>Alternate names:</b>	CAR, CNC1, PKR1, PRKAR1, TSE1, Tissue-specific extinguisher 1, cAMP-dependent protein kinase type I-alpha regulatory subunit
<b>Catalog No.:</b>	AR10717PU-L
<b>Quantity:</b>	50 µg
<b>Uniprot ID:</b>	<a href="#">P10644</a>
<b>NCBI:</b>	<a href="#">NP_002725.1</a>
<b>GeneID:</b>	<a href="#">5573</a>
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Format:</b>	<b>State:</b> Sterile Filtered clear solution. PKA regulatory subunit-I alpha is supplied in 50% glycerol. Unit Definition:One unit is defined as the amount of recombinant PKA catalytic subunit alpha, required to incorporate 1nmol of phosphate into the specific substrate peptide kemptide (LRRASIG) in one minute at 30°C. <b>Purity:</b> > 95.0% as determined by SDS-PAGE.
<b>Description:</b>	PKA regulatory subunit I a Recombinant is a dimeric 90 kDa protein. PKAR-I alpha is purified by proprietary chromatographic techniques. <b>Biological Activity:</b> PKA regulatory subunit alpha specifically inhibits PKA catalytic subunit (Ki about 0.1nM). Activity can be restored by adding cAMP (Kact about 100nM). The binding of the catalytic subunit is dependent on the presence of ATP and Mg. Assay Conditions:Roskoski-Assay:Protein kinase activity can be measured using a modified radioactive assay according to Roskoski et al.: The assay will be performed in a mixture containing 50mM MOPS (pH7.0), 10mM MgCl2, 0.25 mg/ml bovine serum albumin, 100 IJM Kemptide (peptide substrate), 100 IJM unlabeled ATP mixed with [ $\gamma$ -32p] ATP (500-1000 cpm/pmol) and Ca subunit in a final volume of 50 IJl. Reaction is started by addition of the Ca subunit and can be stopped after a 5 minutes incubation at 30°C by spotting the reaction mix onto Whatman P-81 filters and soaking the filters four times in 75mM phosphoric acid (10 ml per sample) for at least 5 minutes. After four washing steps rinse filters with ethanol, dry and count. Roskoski, R., Jr. (1983) Methods Enzymol. 99, 3-6 For the detection of phosphorylation in substrate proteins the phosphotransferase reaction can alternatively be stopped by taking aliquots of the mixture and adding SDS sample buffer. The phosphorylation status of the substrate proteins can subsequently be analysed using SDS PAGE and autoradiography.Zimmermann, B. (1999) Journal of Biological Chemistry.274, 9, 5370-78.
<b>Storage:</b>	PKAR-Ia should be stored at 4°C if entire vial will be used within 2-4 weeks. For long term storage it is recommended to store at -20°C. Avoid multiple freeze-thaw cycles.