Creative Enzymes®

Protein Kinase A Catalytic Subunit β, Active human, Recombinant

Cat. No. NATE-0572

Lot. No. (See product label)

Introduction

Description	cAMP-dependent protein kinase catalytic subunit beta is an enzyme that in humans is encoded by the PRKACB gene. cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the protein kinase A (PKA), which transduces the signal through phosphorylation of different target proteins. The inactive holoenzyme of PKA is a tetramer composed of two regulatory and 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. Four different regulatory subunits and three catalytic subunits of PKA have been identified in humans. The protein encoded by this gene is a member of the Ser/Thr protein kinase family and is a catalytic subunit of PKA. Three alternatively spliced transcript variants encoding distinct isoforms have been observed.
Applications	Kinase activity is measured as the molar amount of phosphate incorporated into the CREBtide substrate peptide per minute per mg protein at 30°C using a final concentration of 50 µM [32P] ATP.
Synonyms	PKA Catalytic Subunit β, Active human; PKA-Cβ; cAMP-dependent protein kinase; PKACB; PRKACB; PKA C-beta; Protein Kinase A Catalytic Subunit β

Product Information

Species	Human
Source	baculovirus infected Sf9 cells
Form	buffered aqueous glycerol solution
Molecular Weight	protein apparent mol wt ~65 kDa
Purity	> 85% (SDS-PAGE)
Buffer	Supplied as a solution of 5 µg in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF and 25% glycerol.
Pathway	AMPK signaling, organism-specific biosystem; Activation of NMDA receptor upon glutamate binding and postsynaptic events, organism-specific biosystem; Adaptive Immune System, organism-specific biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Amphetamine addiction, organism-specific biosystem; Amphetamine addiction, conserved biosystem
Function	ATP binding; cAMP-dependent protein kinase activity; magnesium ion binding; nucleotide binding; protein binding; protein serine/threonine kinase activity; ubiquitin protein ligase binding

Storage and Shipping Information

Stability	−70°C