

Active Recombinant Rat Prkaa1(T172D), GST/MYC-tagged

Cat. No. Prkaa1-144R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Prkaa1 (amino acid residues 3-308), with N-terminal GST and N-terminal MYC, was expressed in E.coli. AMPK alpha 1 has a T172D mutation to mimic the activation of the enzyme through phosphorylation of Thr172 by PDK1.
Species	Rat
Source	E.coli
ProteinLength	3-308 a.a.
Description	The deubiquitylating enzyme (DUB) found to remove these ubiquitin chains from both NUA1 and MARK4 has been identified as USP9X. AMPK activation has also been shown to increase the expression of the E3 ubiquitin ligases MAFBx/Atrogin-1 and MuRF1.
Form	50 mM Tris/HCl pH7.5, 0.1 mM EGTA, 150 mM NaCl, 0.1% β-Mercaptoethanol, 270 mM sucrose, 0.03% Brij-35, 1 mM Benzamidine, 0.2 mM PMSF.
Bio-activity	41.73 Units/mg (64.27 Units/ml) Substrate: AMARA peptide (AMARAASAAALARRR)
Molecular Mass	~64.6 kDa
Purity	>95% by InstantBlue™ SDS-PAGE
Unit Definition	1 Unit = 1 nmole of phosphate incorporated into the substrate in 1 minute.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Storage	12 months at -70°C. Avoid multiple freeze/thaw cycles.
Concentration	2.0 mg/ml
GENE INFORMATION	
Gene Name	Prkaa1 protein kinase, AMP-activated, alpha 1 catalytic subunit [<i>Rattus norvegicus</i>]
Official Symbol	Prkaa1
Synonyms	PRKAA1; protein kinase, AMP-activated, alpha 1 catalytic subunit; 5-AMP-activated protein kinase catalytic subunit alpha-1; AMPK alpha-1 chain; AMPK subunit alpha-1; tau-protein kinase PRKAA1; 5-AMP-activated protein kinase alpha-1 catalytic subunit; AMPKalpha1;
Gene ID	65248
mRNA Refseq	NM_019142
Protein Refseq	NP_062015
Pathway	Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Energy dependent regulation of mTOR by LKB1-AMPK, organism-specific biosystem; Hypertrophic cardiomyopathy (HCM), organism-specific biosystem; Hypertrophic cardiomyopathy (HCM), conserved biosystem; IRS-mediated signalling, organism-specific biosystem; IRS-related events, organism-specific biosystem;
Function	AMP-activated protein kinase activity; AMP-activated protein kinase activity; AMP-activated protein kinase activity; ATP binding; chromatin binding; chromatin binding; eukaryotic elongation factor-2 kinase activator activity; histone serine kinase activity;

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histone serine kinase activity; kinase binding; metal ion binding; nucleotide binding;
protein C-terminus binding; protein binding; protein serine/threonine kinase activity;
tau-protein kinase activity;

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