

# Active Recombinant Full Length Mouse Prkaca Protein

**Cat. No.** Prkaca-608M    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Mouse Prkaca is produced in <i>E. coli</i> . MW=41kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Protein Length</b>   | 1-351 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>      | <p>cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the AMP-activated protein kinase (AMPK), which transduces the signal through phosphorylation of different target proteins. The inactive holoenzyme of AMPK 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 AMPK 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 AMPK. Alternatively spliced transcript variants encoding distinct isoforms have been observed.</p> |
| <b>Purity</b>           | ≥90% (SDS-PAGE).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Formulation</b>      | Liquid. In 25mM potassium phosphate, pH 6.5, containing 5mM β-mercaptoethanol, 5mM EDTA, 150mM NaCl and 50% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Application</b>      | In vitro enzymological studies of neural and hormonal signal transduction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

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

|                              |                                                                                                                                                                           |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | Phosphorylation of target proteins in vivo (via microinjection) including ion channels, transcriptional activator proteins and regulatory enzymes of glycogen metabolism. |
| <b>Reconstitution</b>        | Reconstitute with 100µl sterile water. Further dilutions should be made with medium containing 5% fetal calf serum or a carrier protein.                                  |
| <b>Specific Activity</b>     | 1.5x10 <sup>7</sup> U/mg.                                                                                                                                                 |
| <b>Storage And Stability</b> | -80°C. Stable for at least 6 months after receipt when stored at -20°C. Stable for 2 weeks when stored at +4°C. Avoid freeze/thaw cycles.                                 |

## GENE INFORMATION

|                            |                                                                                                                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | Prkaca protein kinase, cAMP dependent, catalytic, alpha [ <i>Mus musculus</i> ]                                                                                                                                |
| <b>Synonyms</b>            | Prkaca; protein kinase, cAMP dependent, catalytic, alpha; Cs; PKA; PKCD; Pkaca; cAMP-dependent protein kinase catalytic subunit alpha; cAMP-dependent protein kinase catalytic subunit C alpha 2; EC 2.7.11.11 |
| <b>Gene ID</b>             | 18747                                                                                                                                                                                                          |
| <b>mRNA Refseq</b>         | NM_008854                                                                                                                                                                                                      |
| <b>Protein Refseq</b>      | NP_032880                                                                                                                                                                                                      |
| <b>UniProt ID</b>          | P05132                                                                                                                                                                                                         |
| <b>Chromosome Location</b> | 8 C3                                                                                                                                                                                                           |
| <b>Pathway</b>             | Calcium signaling pathway; ErbB signaling pathway; Fc epsilon RI signaling pathway;                                                                                                                            |

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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

Fc gamma R-mediated phagocytosis; Focal adhesion; Glioma; GnRH signaling pathway; Leukocyte transendothelial migration; Long-term potentiation; Long-term depression; MAPK signaling pathway; Melanogenesis; Natural killer cell mediated cytotoxicity; Non-small cell lung cancer; Pathogenic Escherichia coli infection - EHEC; Pathways in cancer; Phosphatidylinositol signaling system; Tight junction; VEGF signaling pathway; Vascular smooth muscle contraction; Vibrio cholerae infection; Wnt signaling pathway; Diabetes pathways; Hemostasis; Synaptic Transmission

#### Function

ATP binding; calcium ion binding; calcium-dependent protein kinase C activity; nucleotide binding; protein binding; transferase activity; protein serine/threonine kinase activity; protein kinase activity

PDB rendering based on 1apm.

