

## Recombinant Mouse Prkag1 Protein, Myc/DDK-tagged

Cat. No. Prkag1-5113M    Lot. No. (See product label)

### SPECIFICATION

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| <b>Product Overview</b> | Purified recombinant protein of mouse full-length protein kinase, AMP-activated, gamma 1 non-catalytic subunit (Prkag1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | <p>AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin.</p> <p>Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit AMPK: AMP-binding results in allosteric activation of alpha catalytic subunit (PRKAA1 or PRKAA2) both by inducing phosphorylation and preventing dephosphorylation of catalytic subunits. ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit. ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive.</p> |
| <b>Molecular Mass</b>   | 38 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

 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

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|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>         | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                   |
| <b>Stability</b>      | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| <b>Storage</b>        | Store at -80 centigrade after receiving vials.                                                                                                |
| <b>Concentration</b>  | >50 µg/mL as determined by microplate BCA method                                                                                              |
| <b>Storage Buffer</b> | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                         |

## GENE INFORMATION

|                        |                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Prkag1 protein kinase, AMP-activated, gamma 1 non-catalytic subunit [ Mus musculus (house mouse) ]                                                                                         |
| <b>Official Symbol</b> | Prkag1                                                                                                                                                                                     |
| <b>Synonyms</b>        | PRKAG1; protein kinase, AMP-activated, gamma 1 non-catalytic subunit; 5-AMP-activated protein kinase subunit gamma-1; AMPKg; AMPK gamma1; AMPK subunit gamma-1; Prkaac; AA571379; BB036179 |
| <b>Gene ID</b>         | 19082                                                                                                                                                                                      |
| <b>mRNA Refseq</b>     | NM_016781                                                                                                                                                                                  |
| <b>Protein Refseq</b>  | NP_058061                                                                                                                                                                                  |
| <b>UniProt ID</b>      | O54950                                                                                                                                                                                     |

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