

Recombinant Rat Protein Kinase, cGMP-dependent, Type II

Cat. No. Prkg2-603R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Prkg2 was produced in Sf9 cells. MW = 86kDa; monomer.
Species	Rat
Source	Sf9 Cells
Description	PKG are serine/threonine kinases that are present in a variety of eukaryotes ranging from the unicellular organism Paramecium to humans. Two PKG genes, coding for PKG type I (PKG-I) and type II (PKG-II), have been identified in mammals. The N-terminus of PKG-I is encoded by two alternatively spliced exons that specify for the PKG-Iα and PKG-Iβ isoforms. PKG-Iβ is activated at ~10-fold higher cGMP concentrations than PKG-Iα. The PKG-I and PKG-II are homodimers of two identical subunits (~75 kDa and ~85 kDa, respectively) and share common structural features.
Purity	≥90% (SDS-PAGE).
Formulation	Liquid. In 20mM TRIS, pH 7.4, containing 1mM EDTA, 5mM β -mercaptoethanol, 100mM NaCl, 10U/ml trasylol, 0.015% NP40 and 50% glycerol.
Concentration	50g/ml.
Specific Activity	~0.5-2.0U/mg protein. 5-fold activation by cGMP (5 μ M). One unit corresponds to 1 μ mol/mg/min using VASptide (RRKVSKQE) as substrate, under the following optimal conditions: 10mM HEPES (pH 7.4), 5mM MgCl ₂ , 1mM DTE, 0.2mM EDTA.

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Stability

The enzyme is relatively unstable. To prevent loss of activity when performing experiments, keep the stock vial of the enzyme on ice (0-4°C) at all times. The enzyme loses activity during a single freeze/thaw cycle. To avoid adherence of the product to plastic, the use of siliconized vials and tips is recommended. After opening, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles.

GENE INFORMATION
Gene Name

Prkg2 protein kinase, cGMP-dependent, type II [*Rattus norvegicus*]

Synonyms

Prkg2; protein kinase, cGMP-dependent, type II; cGKII; GDPKII; cGMP-dependent protein kinase 2; cGK2; CGK 2; cGMP-dependent protein kinase II; cGMP dependent protein kinase type II; protein kinase cGMP- dependent type 2; type II cGMP-dependent protein kinase; protein kinase, cGMP- dependent, type 2; protein kinase, cGMP- dependent, type II; EC 2.7.11.12

Gene ID

25523

mRNA Refseq

NM_013012

Protein Refseq

NP_037144

UniProt ID

Q64595

Chromosome Location

14p22

Pathway

Gap junction; Long-term depression; Olfactory transduction

Function

ATP binding; cGMP binding; cGMP-dependent protein kinase activity; nucleotide binding; protein serine/threonine kinase activity; transferase activity

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