

Recombinant Human Protein Kinase, cGMP-dependent, Type I

Cat. No. PRKG1-604H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PRKG1 was produced in <i>Sf9</i> cells. MW = 76kDa; monomer.
Species	Human
Source	Sf9 Cells
Description	PRKG1 is a homodimer, with each monomer containing a regulatory cGMP-binding domain and a catalytic domain. By Northern blot analysis PRKG1 was shown to be expressed at highest levels in bladder, uterus, adrenal gland, and fallopian tube. PRKG1 plays an important stimulatory role in platelet activation. Expression of recombinant PRKG1 in a reconstituted cell model enhanced von Willebrand factor-induced activation of the platelet integrin alpha-IIb/beta-3.
Purity	≥95% (SDS-PAGE).
Formulation	Liquid. In 20mM TRIS, pH 7.4, containing 1mM EDTA, 1mM β-mercaptoethanol, 100mM NaCl, 10U/ml trasylol and 50% glycerol.
Concentration	50g/ml.
Specific Activity	(1) Basal activity: 0.1U/mg protein. 22-fold stimulation by cGMP (5μM). (2) Max. activity: 2.2U/mg. (3) One unit corresponds to 1μmol/mg/min using VASPtide (RRKVSKQE) as substrate under the following optimal conditions: 10mM HEPES, pH 7.4, containing 5mM MgCl₂, 1mM DTE, 0.2mM EDTA, 30°C.

 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 Enzyme is relatively unstable. To prevent loss of activity when performing experiments, keep the stock vial of the enzyme on ice at all times. Enzyme loses activity during a single freeze/thaw cycle. After opening, prepare aliquots and store at -20°C.

GENE INFORMATION

Gene Name [PRKG1 protein kinase, cGMP-dependent, type I \[Homo sapiens \]](#)

Synonyms PRKG1; protein kinase, cGMP-dependent, type I; PGK; PKG; CGKI; PRKG1B; PRKGR1B; FLJ36117; MGC71944; cGKI-BETA; cGKI-alpha; DKFZp686K042; protein kinase, cGMP-dependent, regulatory, type I, beta; protein kinase, cGMP-dependent, type I; EC 2.7.11.12

Gene ID [5592](#)

mRNA Refseq [NM_001098512](#)

Protein Refseq [NP_001091982](#)

MIM [176894](#)

UniProt ID [Q13976](#)

Chromosome Location 10q11.2

Pathway Gap junction; Long-term depression; Olfactory transduction; Vascular smooth muscle contraction

Function ATP binding; cGMP binding; cGMP-dependent protein kinase activity; nucleotide

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binding; protein serine/threonine kinase activity; transferase activity

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