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*Sf9 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	50μg/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 1pmol/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℃.

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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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