

# Recombinant Human PRKG1, His-tagged

**Cat. No.** PRKG1-564H    **Lot. No.** (See product label)

## SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>  | Recombinant human PRKG1 was expressed by baculovirus in <i>Sf9</i> insect cells using an N-terminal His tag. MW=78kDa.                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>            | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>       | 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. |
| <b>Purity</b>            | 70%.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Specific Activity</b> | 579 pmoles/min/μg. Enzyme reaction is conducted in a buffer containing 50 mM HEPES (pH7.5), 10 mM MgCl <sub>2</sub> , 1 mM EGTA, 200 μM ATP, 0.01% Brij-35, and 2 μM substrate (SER/THR 14, Invitrogen) at room temperature for 1 hour.                                                                                                                                                                                                                                     |
| <b>Application</b>       | Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Formulated In</b>     | 25 mM Tris-HCl, pH 7.5, 100 mM NaCl, 0.05% Tween-20, 20% glycerol, and 1 mM DTT.                                                                                                                                                                                                                                                                                                                                                                                            |

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**Stability** >12 months at –80°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\\_006258.2](#)

**Protein Refseq** [NP\\_006249.1](#)

**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 binding; protein serine/threonine kinase activity; transferase activity

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