

## Protein Kinase D2/PRKD2 Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	protein kinase D2;nPKC-D2;PKD2;HSPC187
Protein Construction:	A DNA sequence encoding the amino acid sequence (Met 1-Leu 878) of human PRKD2 (NP_057541.2) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q9BZL6-1
Molecular Weight:	124 kDa (predicted); 120 kDa (reducing conditions)

### QC Testing

Biological Activity:	The specific activity was determined to be > 30 nmol/min/mg using synthetic CREBtide peptide (KRREILSRRPSYR) as substrate.
Purity:	> 82 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 500 mM NaCl, 0.5 mM PMSF, 10% glycerol, pH 8.0.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Serine/threonine-protein kinase D2, also known as PRKD2 and PKD2, is a cytoplasm and membrane protein that belongs to the protein kinase superfamily, CAMK Ser/Thr protein kinase family and PKD subfamily. PRKD2 / PKD2 is widely expressed. It contains one PH domain, two phorbol-ester/DAG-type zinc fingers and one protein kinase domain. PRKD2 / PKD2 is activated by DAG and phorbol esters. Phorbol-ester/DAG-type domains bind DAG, mediating translocation to membranes. Autophosphorylation of Ser-71 and phosphorylation of Ser-76 by PKC relieves auto-inhibition by the PH domain. PRKD2 / PKD2 converts transient diacylglycerol (DAG) signals into prolonged physiological effects, downstream of PKC. Involved in resistance to oxidative stress.

Reference

Zhang QH, et al., 2000, Genome Res 10 (10): 1546-60.

Di Bernardo MC, et al., 2008, Nature genetics. 40 (10) :1204-10.

Zhang L, et al., 2009, American journal of nephrology. 30 (6) :505-13.

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