

## CDC42BPB Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	CDC42 binding protein kinase beta (DMPK-like);MRCKB;CDC42 binding protein kinase $\beta$ (DMPK-like)
Protein Construction:	A DNA sequence encoding the amino acid (Met 1-His 427) of human CDC42BPB (Q9Y5S2) 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:	Q9Y5S2
Molecular Weight:	82.4 kDa (predicted); 70 kDa (reducing conditions)

### QC Testing

Biological Activity:	No Kinase Activity
Purity:	> 94 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 50 mM PBS, 500 mM NaCl, 10% gly, 2 mM GSH, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### 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 recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

CDC42BPB is a member of the serine / threonine protein kinase family that contains a Cdc42 / Rsc-binding p21 binding domain similar to that of PAK kinase. The kinase domain of this protein is related to the myotonic dystrophy kinase related ROK and this kinase may have functions in downstream regulating of Cdc42 in cytoskeletal recognition. It has been reported that the CDC42BPB protein take part in regulating numerous

cellular functions by binding to members of a serine / threonine protein kinase subfamily. These functions include the remodeling of the cell cytoskeleton that is a feature of cell growth and differentiation.

### Reference

Moncrieff CL,et al.(1999) Cloning and Chromosomal Localization of Human Cdc42-Binding Protein Kinase beta. *Genomics*. 57 (2): 297-300.

Boyd Y,et al.(2001) Orthologs of seven genes (AKT1, CDC42BPB, DIO3, EIF5, JAG2, KLC, NDUFB1) from human Chromosome 14q32 map to distal chicken Chromosome 5. *Mammalian Genome*. 13 (2): 120-2.

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