

Human DAPK3 / ZIPK Protein (GST Tag)

Catalog Number: 10757-H09B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

DLK; ZIP; ZIPK

Protein Construction:

A DNA sequence encoding the full length of human DAPK3 (NP_001339.1) (Met 1-Arg 454) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be 5 nmol/min/mg using MBP as substrate.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human DAPK3/GST chimera consists of 678 amino acids and predicts a molecular mass of 79 kDa. It migrates as an approximately 70 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 10mM GSH, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

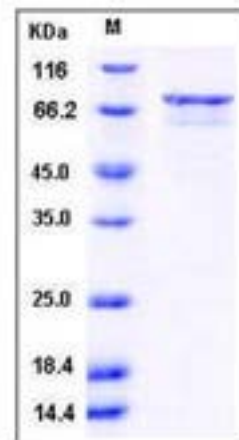
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Death-associated protein kinase 3, also known as DAP kinase 3, ZIP-kinase, DAPK3 and ZIPK, is a nucleus and cytoplasm protein which belongs to the protein kinase superfamily, CAMK Ser/Thr protein kinase family and DAP kinase subfamily. DAPK3 / ZIPK contains one protein kinase domain. It is a serine/threonine kinase which acts as a positive regulator of apoptosis. It phosphorylates histone H3 on 'Thr-11' at centromeres during mitosis. DAPK3 / ZIPK is a homodimer or forms heterodimers with ATF4. Both interactions require an intact leucine zipper domain and oligomerization is required for full enzymatic activity. It also binds to DAXX and PAWR, possibly in a ternary complex which plays a role in caspase activation. DAPK3 / ZIPK regulates myosin light chain phosphatase through phosphorylation of MYPT1 thereby regulating the assembly of the actin cytoskeleton, cell migration, invasiveness of tumor cells, smooth muscle contraction and neurite outgrowth. It is involved in the formation of promyelocytic leukemia protein nuclear body (PML-NB), one of many subnuclear domains in the eukaryotic cell nucleus, and which is involved in oncogenesis and viral infection.

References

1. Kawai T., et al., 1998, Mol. Cell. Biol. 18:1642-1651. 2. Murata-Hori M., et al., 1999, FEBS Lett. 451:81-84. 3. Kawai T., et al., 2003, Mol. Cell. Biol. 23:6174-6186.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>