Recombinant Human ACK1/TNK2 Protein (GST Tag)

Catalog Number: PKSH030470

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human ACK1/TNK2 protein Gly 110-Trp 476, with an N-terminal GST
Calculated MW	68.0 kDa
Observed MW	62 kDa
Accession	NP_005772.3
Bio-activity	Not validated for activity

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/ gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 20mM Tris, 500mM NaCl, pH 7.4, 10% glycerol, 0.5mM EDTA, 0.5mM PMSF, 0.5mM TCEP

Data

> 90 % as determined by reducing SDS-PAGE.

Background

ACK1 (also known as ACK, TNK2, or activated Cdc42 kinase) is a structurally unique non-receptor tyrosine kinase that is expressed in diverse cell types. This downstream effector of CDC42 which mediates CDC42-dependent cell migration via phosphorylation of BCAR1. The ACK1 protein may be involved in a regulatory mechanism that sustains the GTP-bound active form of Cdc42Hs and which is directly linked to a tyrosine phosphorylation signal transduction pathway. ACK1 integrates signals from plethora of ligand-activated receptor tyrosine kinases (RTKs), for example, MERTK, EGFR, HER2 and PDGFR to initiate intracellular signaling cascades. It binds to both poly- and mono-ubiquitin and regulates ligand-induced degradation of EGFR. ACK1 transduces extracellular signals to cytosolic and nuclear effectors such as the protein kinase AKT/PKB and androgen receptor (AR), to promote cell survival and growt h. ACK1 participates in tumorigenesis, cell survival, and migration. Gene amplification and overexpression of ACK1 were found in many cancer types such as those of the lung and prostate. Recently, four somatic missense mutations of ACK1, which occur in the N-terminal region, the C-lobe of the kinase domain, and the SH3 domain, were identified in cancer tissue samples.

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