Activated CDC42 Kinase 1 (TNK2) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	Activated CDC42 kinase 1 (Tnk2), Recombinant Protein
Full Product Name	Recombinant Rat Activated CDC42 kinase 1 (Tnk2) , partial
Product Gene Name	Tnk2 recombinant protein
Product Synonym Gene Name	Tnk2
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	115,068 Da
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q5U2X5
Species	Rat
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Tnk2 recombinant protein	This gene encodes a tyrosine kinase that binds Cdc42Hs in its GTP-bound form and inhibits both the intrinsic and GTPase-activating protein (GAP)-stimulated GTPase activity of Cdc42Hs. This binding is mediated by a unique sequence of 47 amino acids C-terminal to an SH3 domain. The 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. Several alternatively spliced transcript variants have been identified from this gene, but the full-length nature of only two transcript variants has been determined.
Other Notes	Small volumes of Tnk2 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Tnk2 purchase	MBS1342968 is a recombinant protein targeting Tnk2. Also known as Recombinant Rat Activated CDC42 kinase 1 (Tnk2) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Tnk2. It may not necessarily be applicable to this product.

NCBI GI #	56605750
NCBI GeneID	303882
NCBI Accession #	NP_001008337.1
UniProt Primary Accession #	Q5U2X5
UniProt Related Accession #	Q5U2X5

GenBank Nucleotide #	NM_001008336.1
NCBI Official Full Name	activated CDC42 kinase 1
NCBI Official Synonym Full Names	tyrosine kinase, non-receptor, 2
NCBI Official Symbol	Tnk2
UniProt Protein Name	Activated CDC42 kinase 1
UniProt Synonym Protein Names	Tyrosine kinase non-receptor protein 2
Protein Family	Activated CDC42 kinase
UniProt Gene Name	Tnk2
UniProt Synonym Gene Names	ACK-1
NCBI Protein Information	activated CDC42 kinase 1
UniProt Comments for Tnk2	Non-receptor tyrosine-protein and serine/threonine-protein kinase that is implicated in cell spreading and migration, cell survival, cell growth and proliferation. Transduces extracellular signals to cytosolic and nuclear effectors. Phosphorylates AKT1, AR, MCF2, WASL and WWOX. Implicated in trafficking and clathrin-mediated endocytosis through binding to epidermal growth factor receptor (EGFR) and clathrin. Binds to both poly- and mono-ubiquitin and regulates ligand-induced degradation of EGFR, thereby contributing to the accumulation of EGFR at the limiting membrane of early endosomes. Downstream effector of CDC42 which mediates CDC42-dependent cell migration via phosphorylation of BCAR1. May be involved both in adult synaptic function and plasticity and in brain development. Activates AKT1 by phosphorylating it on 'Tyr-176'. Phosphorylates AR on 'Tyr-267' and 'Tyr-363', thereby promoting its recruitment to androgen-responsive enhancers (AREs). Phosphorylates WWOX on 'Tyr-287'. Phosphorylates MCF2, thereby enhancing its activity as a guanine nucleotide exchange factor (GEF) toward Rho family proteins. Contributes to the control of AXL receptor levels. Confers metastatic properties on cancer cells and promotes tumor growth by negatively regulating tumor suppressor such as WWOX and positively regulating pro-survival factors such as AKT1 and AR ().
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