Recombinant Human NEK7 Protein (His &GST Tag)

Catalog Number: PKSH031099

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

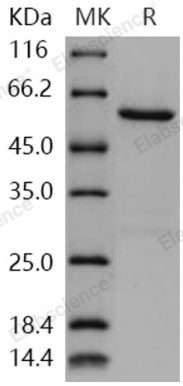
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human NEK7 protein Met 1-Ser 302, with an N-terminal His & GST
Calculated MW	62.4 kDa
Observed MW	58 kDa
Accession	NP_598001.1
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.5, 0.5mM Reduced Glutathione, 0.5mM PMSF Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

NIMA (never in mitosis gene a)-related kinase 7, NEK7 belongs to the NIMA subfamily, NEK Ser/Thr protein kinase family, protein kinase superfamily. NEKs (NIMA-related kinases) are mammalian serine/threonine (Ser/Thr) protein kinases structurally related to Aspergillus NIMA (Never in Mitosis, gene A), which plays essential roles in mitotic signaling. NEKs share an amino-terminal catalytic domain related to NIMA, an Aspergillus kinase involved in the control of several aspects of mitosis, and divergent carboxyl-terminal tails of varying length. NEKs are commonly referred to as mitotic kinases, although a definitive in vivo verification of this definition is largely missing. Reduction in the activity of NEK7 or its close paralog, NEK6, has previously been shown to arrest cells in mitosis, mainly at metaphase. NEK7 is a regulator of cell division, and reveal it as an essential component for mammalian growth and survival. The intimate connection between tetraploidy, aneuploidy and cancer development suggests that NEK7 deregulation can induce oncogenesis. The endogenous NEK7 protein is enriched at the centrosome in a microtubule-independent manner. Overexpression of wt or kinase-defective NEK7 resulted in cells of rounder appearance, and higher proportions of multinuclear and apoptotic cells.

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