

NEK6 Protein, Human (Sf9, GST)

Cat. No.:	HY-P701825
Synonyms:	NEK6; Serine/threonine-protein kinase Nek6; Never in mitosis A-related kinase 6; NimA-related protein kinase 6; Protein kinase SID6-1512
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9HC98 (A2-T313)
Gene ID:	10783
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>NEK6 protein, a pivotal kinase, assumes a crucial role in driving mitotic cell cycle progression with indispensable functions in chromosome segregation at the metaphase-anaphase transition, robust mitotic spindle formation, and cytokinesis. Its substrate spectrum includes ATF4, CIR1, PTN, RAD26L, RBBP6, RPS7, RPS6KB1, TRIP4, STAT3, and histones H1 and H3, reflecting its versatile impact on various cellular processes. NEK6's phosphorylation of KIF11 promotes mitotic spindle formation, and it actively participates in G2/M phase cell cycle arrest induced by DNA damage. Inhibition of NEK6 activity leads to apoptosis, underlining its essential role in cell survival. Intriguingly, NEK6 may contribute to tumorigenesis by suppressing p53/TP53-induced cancer cell senescence. Moreover, its phosphorylation of EML4 at 'Ser-144' promotes dissociation from microtubules during mitosis, a critical step for efficient chromosome congression. NEK6's multifaceted functions underscore its significance in orchestrating key events during mitotic progression and its potential implications in cancer-related processes.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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