

## NEK9 Protein, Human (Sf9, GST)

<b>Cat. No.:</b>	HY-P701827
<b>Synonyms:</b>	NEK9; Serine/threonine-protein kinase Nek9; Nerccl1 kinase; Never in mitosis A-related kinase 9; NimA-related protein kinase 9; NimA-related kinase 8; Nek8
<b>Species:</b>	Human
<b>Source:</b>	Sf9 insect cells
<b>Accession:</b>	Q8TD19 (S2-L979);(ΔT346-K731)
<b>Gene ID:</b>	91754
<b>Molecular Weight:</b>	Approximately 91.6 KDa

### PROPERTIES

<b>Biological Activity</b>	The activity was measured by off-chip mobility shift assay(MSA). The enzyme was incubated with fluorescence-labeled substrate and Mg(or Mn)/ATP. The phosphorylated and unphosphorylated substrates were separated and detected by MSA device. The KM of NEK9 is 54.69 μM
<b>Appearance</b>	Solution
<b>Formulation</b>	Supplied as a 0.22 μm filtered solution of 50 mM HEPES (pH7.5), 200 mM NaCl, 1 mM DTT, 20% glycerol.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	Please use rapid thawing with running water to thaw the protein.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Shipping with dry ice

### DESCRIPTION

<b>Background</b>	NEK9, a pleiotropic regulator of mitotic progression, orchestrates critical processes in spindle dynamics and chromosome separation. Its pivotal role extends to phosphorylating various substrates, including histones, myelin basic protein, beta-casein, and BICD2. Specifically, NEK9 exhibits phosphorylation activity towards histone H3 on serine and threonine residues and beta-casein on serine residues. The multifaceted influence of NEK9 is underscored by its involvement in the G1/S transition and S phase progression. Moreover, NEK9 plays a key role in modulating the activity of NEK6 and NEK7, enhancing their functionality by releasing the autoinhibitory functions of Tyr-108 and Tyr-97, respectively. This comprehensive regulatory role emphasizes NEK9's significance in governing mitotic processes and ensuring the precise orchestration of cellular events during cell cycle progression.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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