

# Recombinant Human NEK2 Protein (1-271, T175A), His tagged

**Cat. No.** NEK2-0906H    **Lot. No.** (See product label)

## SPECIFICATION

**Product Overview**      Recombinant Human NEK2(1-271, T175A)-TEV-6His-C Protein was expressed in E. coli.

**Species**                      Human

**Source**                        E.coli

**ProteinLength**              1-271, T175A

**Description**

Protein kinase which is involved in the control of centrosome separation and bipolar spindle formation in mitotic cells and chromatin condensation in meiotic cells. Regulates centrosome separation (essential for the formation of bipolar spindles and high-fidelity chromosome separation) by phosphorylating centrosomal proteins such as CROCC, CEP250 and NINL, resulting in their displacement from the centrosomes. Regulates kinetochore microtubule attachment stability in mitosis via phosphorylation of NDC80. Involved in regulation of mitotic checkpoint protein complex via phosphorylation of CDC20 and MAD2L1. Plays an active role in chromatin condensation during the first meiotic division through phosphorylation of HMGA2. Phosphorylates: PPP1CC; SGO1; NECAB3 and NPM1. Essential for localization of MAD2L1 to kinetochore and MAPK1 and NPM1 to the centrosome. Phosphorylates CEP68 and CNTLN directly or indirectly. NEK2-mediated phosphorylation of CEP68 promotes CEP68 dissociation from the centrosome and its degradation at the onset of mitosis. Involved in the regulation of centrosome disjunction.

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|                       |   |
|-----------------------|---|
| <b>Form</b>           | Liquid  |
| <b>Endotoxin</b>      | < 0.01 EU per µg of the protein   |
| <b>Purity</b>         | 90%   |
| <b>Stability</b>      | Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.   |
| <b>Storage</b>        | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| <b>Storage Buffer</b> | Supplied as sterile 50mM Tris-HCl (pH 7.5), 200mM NaCl, 20% glycerol  |
| <b>Shipping</b>       | It is shipped out with blue ice.  |

## GENE INFORMATION

|                        |   |
|------------------------|---|
| <b>Gene Name</b>       | NEK2 NIMA (never in mitosis gene a)-related kinase 2 [ Homo sapiens (human) ]   |
| <b>Official Symbol</b> | NEK2  |
| <b>Synonyms</b>        | NEK2; NIMA (never in mitosis gene a)-related kinase 2; serine/threonine-protein kinase Nek2; HsPK 21; NEK2A; NLK1; nimA-like protein kinase 1; nimA-related protein kinase 2; HsPK21; |
| <b>Gene ID</b>         | 4751  |
| <b>mRNA Refseq</b>     | NM_001204182  |
| <b>Protein Refseq</b>  | NP_001191111  |

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| <b>MIM</b> | 604043 |
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| <b>UniProt ID</b> | P51955 |
|-------------------|--------|

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