

Recombinant Human NLK Protein (His & GST Tag)

Catalog Number: PKSH030360

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

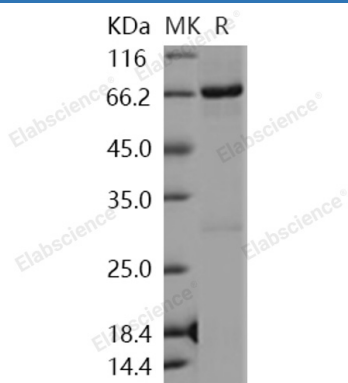
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human NLK protein Val121-Glu 527, with an N-terminal His & GST
Calculated MW	74.1 kDa
Observed MW	73 kDa
Accession	Q9UBE8
Bio-activity	The specific activity was determined to be 3 nmol/min/mg using MBP as substrate.

Properties

Purity	> 91 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
Formulation	Supplied as sterile solution of 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol

Data



> 91 % as determined by reducing SDS-PAGE.

Background

Nemo-like kinase contains 1 protein kinase domain and belongs to the protein kinase superfamily, CMGC Ser/Thr protein kinase family and MAP kinase subfamily. It also contains a TQE activation loop motif in which autophosphorylation of the threonine residue (Thr-298) is sufficient for kinase activation. As a serine/threonine-protein kinase, nemo-like kinase regulates a number of transcription factors with key roles in cell fate determination. It is a positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2. Activation of this pathway causes binding to and phosphorylation of the histone methyltransferase SETDB1. The NLK-SETDB1 complex subsequently interacts with PPARG, leading to methylation of PPARG target promoters at histone H3K9 and transcriptional silencing. The resulting loss of PPARG target gene transcription inhibits adipogenesis and promotes osteoblastogenesis in mesenchymal stem cells (MSCs). Nemo-like kinase also is a negative regulator of the canonical Wnt/beta-catenin signaling pathway.

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