
Product Name: Human DLK1 Protein Monomer, His Tag

Product Code: CSP-26440-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: DLK1, Protein Monomer

Alternate Name(s): Delta-like non-canonical Notch ligand 1, Protein delta homolog 1, DLK-1, pG2, Pref-1, FA1

Expression Host
HEK293T

Amino Acid Range
A24-Q303

Protein Construct

DLK1 monomer protein contains the DLK1 extracellular domain (UniProt# P80370, amino acids Ala24-Gln303) fused with a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight

31 kDa. The migration range of the dimer protein with glycosylation under non-reducing condition is between 40-50 kDa on SDS PAGE.

Purity

Greater than 90% target protein as determined by SDS-PAGE under non-reducing condition

Shipping Conditions

Frozen Ice Packs

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4 with 10% trehalose as a protectant

Stability & Storage

On receipt, store at -20 C or lower for long term storage.

This product is stable at:

-20 to -70 C for 12 months from date of receipt in lyophilized state.

-70 C for 3 months after reconstitution under sterile conditions.

Avoid repeated freeze-thaw cycles

Reconstitution of lyophilized product

For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 µg/mL.

Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.

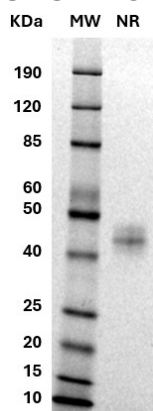
For 25µg product size:

Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

SDS-PAGE

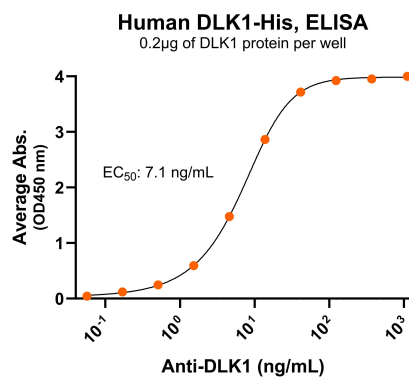


MW: Molecular Weight marker reduced condition

NR: DLK1 monomer under non-reduced condition

The migration range of the dimer protein with glycosylation under non-reducing condition is between 40-50 kDa on SDS PAGE.

Antibody Binding



Immobilized human DLK1-His monomer protein (Cat. No. CSP-26440-01) at 2 µg/mL (100 µL/well) can bind anti-human DLK1 monoclonal antibody with half maximal effective concentration (EC₅₀) range of 6.5-25.8 ng/mL (QC tested).

Background

DLK1 (Delta-like non-canonical Notch ligand 1), also known as Pref-1 or FA1, is a Type 1 transmembrane glycoprotein. It plays a critical role in controlling cell differentiation, tissue growth, and stem cell maintenance. DLK1 is highly expressed during embryonic development and functions as a regulator of multiple developmental processes, including adipogenesis, myogenesis, neurogenesis, and endocrine organ formation. The extracellular domain of DLK1 contains six EGF-like repeats and can be proteolytically cleaved to generate a soluble form that acts through paracrine and endocrine mechanisms. Although structurally related to canonical Notch ligands, DLK1 primarily functions as a non-canonical signaling molecule and has been implicated in regulating pathways involved in stem cell fate and tissue regeneration. Dysregulation of DLK1 expression has been associated with metabolic disorders, developmental abnormalities, and several cancers, highlighting its importance as both a biological marker and a potential therapeutic target.