

Human DKK1 / Dkk-1 Protein (His Tag)

Catalog Number: 10170-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

SK, DKK-1

Protein Construction:

A DNA sequence encoding the human DKK1 precursor (NP_036374.1) (Met 2-His 266) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to inhibit Wnt3a-induced alkaline phosphatase production by C3H10T1/2 cells. The ED50 for this effect is approximately 0.1-0.4 µg/ml in the presence of 10 ng/mL of mouse Wnt3a.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Thr 32 or Ser 35

Molecular Mass:

The recombinant human DKK1 protein consists of 235 amino acids and has a calculated molecular mass of 25.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh DKK1 is approximately 45 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

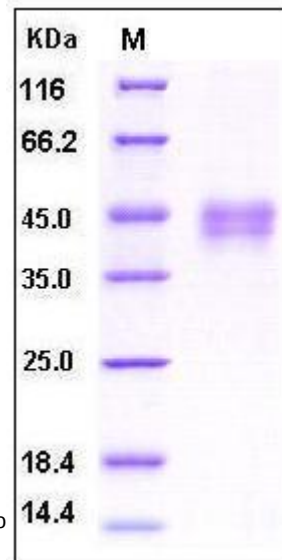
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

in the products.

Protein Description

DKK1 (dickkopf related protein 1) is a head inducer secreted from the vertebrate head organizer and belongs to the DKK protein family including four members. DKK1 is synthesized initially as a precursor with an N-terminal signal peptide and two cysteine-rich domains. DKK proteins have distinct patterns of expression in adult and embryonic tissues and have effects on Wnt signaling implicated in diverse processes. Dkk1 is a specific and high-affinity ligand for LRP6 (LDL-receptor-related protein 6) acting as a Wnt co-receptor. Dkk1 blocks LRP6-mediated Wnt/beta-catenin signaling by antagonistically inhibiting the formation of Wnt-Fz-LRP6 complex which triggers the Wnt signal pathway. It is revealed that Wnt signaling in osteoblasts is necessary to promote BMP2-mediated differentiation of pre-osteoblast cells, and therefore, DKK1 may play a key role in regulating pre-osteoblast differentiation and the development of multiple myeloma-associated osteolytic bone lesions.

References

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6. Qiang, Y.M. et al., 2008, Blood. 112: 196-207.

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