Rhesus DKK-1 / Dkk1 Protein (256 Asn/Gln, His Tag)

Catalog Number: **11089-K08H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

DKK1

Protein Construction:

A DNA sequence encoding the rhesus DKK1 (XP_001098844.1) precursor (Met 1-His 266) (256 Asn / Gln) was expressed, fused with a C-terminal polyhistidine tag.

Source: Rhesus

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to inhibit Wnt3a induced alkaline phosphatase production by C3H10T1/2 2A6 mouse embryonal fibroblast cells . The ED50 for this effect is typically 0.5-3 μg/ml in the presence of 10 ng/mL of 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 ℃

Predicted N terminal: Thr 32

Molecular Mass:

The recombinant rhesus DKK1 comprises 246 amino acids with a predicted molecular mass of 27.2 kDa. As a result of glycosylation, the apparent molecular mass of rhesus DKK1 is approximately 38-43 kDa in SDS-PAGE under reducing conditions.

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.

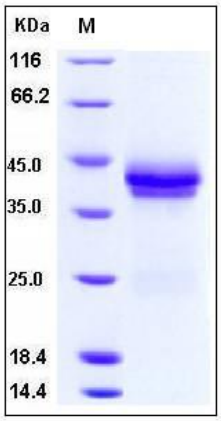
Usage Guide

Storage:

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

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with 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

1. Krupnik, V.E. et al., 1999, Gene. 238: 301-
2. Fedi, P. et al., 1999, J. Biol. Chem. 274: 19465-19472.
3. Glinka, A. et al., 1998, Nature. 391: 357-362.
4. Mao, B. et al., 2001, Nature. 411: 321-325.
5. Semenov, M.V. et al., 2001, Curr. Biol. 11: 951-961.
6. Qiang, Y.M. et al., 2008, Blood. 112: 196-207.