

Recombinant Human DKK1, C13&N15-labeled

Cat. No. DKK1-229H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human DKK1 MS Standard Protein, C13 and N15-labeled (DKK-1, Heavy Labeled) Thr 32 - His 266 (Accession # NP_036374.1) was produced in human 293 cells (HEK293).

Species Human

Source HEK293

ProteinLength 32-266 a.a.

Description

Members of the dickkopf-related protein family (DKK-1, -2, -3, and -4) are secreted proteins with two cysteine-rich domains separated by a linker region. And DKK1 takes part in embryonic development through its inhibition of the WNT signaling pathway, binds to LRP6 with high affinity and prevents the Frizzled-Wnt-LRP6 complex formation in response to Wnts.[1] DKK1 promotes LRP6 internalization and degradation when it forms a ternary complex with the cell surface receptor Kremen. DKK1 not only functions as a head inducer during development, but also regulates joint remodeling and bone formation, which suggests roles for DKK1 in the pathogenesis of rheumatoid arthritis and multiple myeloma.[2] More recently research reported, DKK1 impacts eye development from a defined developmental time point on, and is critical for lens separation from the surface ectoderm via β -catenin mediated Pdgfra and E-cadherin expression.[3]

Form Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4. Normally Mannitol or

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Trehalose are added as protectants before lyophilization.

Molecular Mass

DKK-1, Heavy Labeled, fused with 6xHis tag at the C-terminus, has a calculated MW of 25.8 kDa. The predicted N-terminus is Thr 32 or Ser 35. DTT-reduced Protein migrates as 40 kDa due to glycosylation.

Endotoxin

Less than 1.0 EU per µg of the DKK-1, Heavy Labeled by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Storage

Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).

GENE INFORMATION

Gene Name

DKK1 dickkopf 1 homolog (*Xenopus laevis*) [*Homo sapiens*]

Official Symbol

DKK1

Synonyms

DKK1; dickkopf 1 homolog (*Xenopus laevis*); dickkopf (*Xenopus laevis*) homolog 1; dickkopf-related protein 1; DKK 1; SK; hDkk-1; dickkopf-1 like; dickkopf related protein-1; DKK-1;

Gene ID

[22943](#)

mRNA Refseq

[NM_012242](#)

Protein Refseq

[NP_036374](#)

MIM

[605189](#)

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UniProt ID	O94907
Chromosome Location	10q11.2
Pathway	Direct p53 effectors, organism-specific biosystem; Presenilin action in Notch and Wnt signaling, organism-specific biosystem; Regulation of Wnt-mediated beta catenin signaling and target gene transcription, organism-specific biosystem; Validated targets of C-MYC transcriptional repression, organism-specific biosystem; Wnt Signaling Pathway NetPath, organism-specific biosystem; Wnt signaling network, organism-specific biosystem; Wnt signaling pathway, organism-specific biosystem;
Function	growth factor activity; low-density lipoprotein particle receptor binding; protein binding; receptor antagonist activity; signal transducer activity;

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