

Active Recombinant Human Dickkopf Homolog 1 (Xenopus Laevis)

Cat. No. DKK1-4318H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	DKK1 Human Recombinant produced in HEK-293 cells is a single, glycosylated, polypeptide chain containing 184 amino acids with a molecular weight of 20.7 kDa though on SDS-PAGE migrates at about 28kDa due to the glycosilation. The DKK1 is purified by proprietary chromatographic techniques.
Species	Human
Source	HEK293
Description	DKK1 is part of the dickkopf family. DKK1 is a secreted protein with 2 cysteine rich regions and takes part in embryonic development through its inhibition of the WNT signaling pathway. High levels of DKK1 in bone marrow plasma and peripheral blood is associated with the presence of osteolytic bone lesions in patients with multiple myeloma. Induction of DKK1 contributes to the pathological cascade triggered by beta-amyloid and is significantly involved in the development of tau phosphorylation. DKK1 reduces the differentiation of osteoblastic precursor cells. DKK1 is an important member in multiple myeloma bone disease.
Form	The DKK1 protein was lyophilized from a 0.2µ filtered solution containing no additives or preservatives.
Purity	Greater than 95.0% as determined by SDS-PAGE.
Bio-activity	IC50 = 0.4 to 1.2 nM, determined by the concentration dependent inhibition of human

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MMP-2 hydrolysis of a peptide substrate (7-methoxycoumarin-4-yl)acetyl-Pro-Leu-Gly-Leu-(3-[2, 4-dinitrophenyl]-L-2, 3-diaminopropionyl)-Ala-Arg-NH₂, under conditions in which recombinant pro-MMP-2 is activated, and the peptide substrate concentration is 5 μ M.

Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Solubility It is recommended to reconstitute the lyophilized DKK1 in sterile 18M μ -cm H₂O not less than 100g/ml, which can then be further diluted to other aqueous solutions

Amino acid sequence
 CTCVPPHPQT AFCNSDLVIR AKFVGTPEVN QTTLYQRYEI
 KMTKMYKGFQALGDAADIRF VYTPAMESVC GYFHRSHNRS EEFLIAGKLQ
 DGLLHITTCS FVAPWNSLSL AQRRGFTKTY TVGCEECTVF PCLSIPCKLQ
 SGTHCLWTDQ LLGSEKGFQ SRHLACLPRE PGLCTWQSLR SQIA.

Storage Lyophilized DKK1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution DKK1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Pathways Wnt signaling pathway

GENE INFORMATION

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

Official Symbol DKK1

Synonyms dickkopf homolog 1; dickkopf related protein-1; dickkopf-1 like DKK-1; Dickkopf-1; Dkk-1; OTTHUMP00000019617; SK; hDkk-1; dickkopf (*Xenopus laevis*) homolog 1; dickkopf homolog 1; dickkopf homolog 1 (*Xenopus laevis*); dickkopf related protein-1;

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	dickkopf-1 like
Gene ID	22943
mRNA Refseq	NM_012242
Protein Refseq	NP_036374
MIM	605189
UniProt ID	O94907
Chromosome Location	10q11.2
Function	growth factor activity; low-density lipoprotein receptor binding; protein binding; signal transducer activity

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