



Recombinant human Dkk-1

20150227BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-407S
Size:	2 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	22943
Synonyms:	Dickkopf-related protein-1, Dickkopf-1, SK

DKK-1 is a member of the DKK protein family which also includes DKK-2, DKK-3 and DKK-4. DKK-1 was originally identified as a *Xenopus* head forming molecule that behaves as an antagonist for Wnt signaling. Subsequent studies have shown that DKK-1 and DKK-4 play an important regulatory role in the Wnt / β -catenin signaling pathway by forming inhibitory complexes with LDL receptor-related proteins 5 and 6 (LRP5 and LRP6), which are essential components of the Wnt/ β -catenin signaling system. LRP5 and LRP6 are single-pass transmembrane proteins that appear to act as co-receptors for Wnt ligands involved in the Wnt/ β -catenin signaling cascade. It has been suggested that by inhibiting Wnt/ β -catenin signaling, which is essential for posterior patterning in vertebrates, DKK-1 permits anterior development. This notion is supported by the finding that mice deficient of DKK-1 expression lack head formation and die during embryogenesis. Recombinant human DKK-1 expressed in human 293 cells is a 35-40 kDa glycoprotein containing 235 amino-acid residues.

Sequence

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TLNSVLNSNA IKNLPPPLGG AAGHPGSAVS AAPGILYPPG  
NKYQTIDNYQ PYPCAEDEEC GTDEYCASPT RGGDAGVQIC  
LACRKRKRC MRHAMCCPGN YCKNGICVSS DQNHFRGEIE  
ETITESFGND HSTLDGYSRR TTLSSKMYHT KGQEGSVCLR  
SSDCASGLCC ARHFWSKICK PVLKEGQVCT KHRKRGSHGL  
EIFQR CYCGE GLScriQKDH HQASNSRLH TCQRH
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Database References

Protein RefSeq:	NP_036374.1
Uniprot ID:	O94907
mRNA RefSeq:	NM_012242.2

Product Specifications

Expressed in	HEK 293 cells
Purity	> 97% by SDS-PAGE & HPLC analyses
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	235
MW:	35-40 Kda

Biological Activity: Determined by its ability to inhibit the proliferation of HCT116 colorectal carcinoma cells. Approximately 40% growth inhibition was achieved at a DKK-1 concentration of 200ng/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!