DKK-1 Human HEK293 cells

Product Data Sheet

Type: Recombinant
Source: HEK293 cells
Species: Human
Other names: Dickkopf-related protein-1, Dickkopf-1, SK

Cat. No.:

RBG10112002	(2 µg)
RBG10112010	(10 µg)
RBG10112100	(100 µg)

Description

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 /beta-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/beta-catenin signaling system. LPR5 and LPR6 are single-pass transmembrane proteins that appear to act as co-receptors for Wnt ligands involved in the Wnt/beta-catenin signaling cascade. It has been suggested that by inhibiting Wnt/beta-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.

Research topic

Bone and cartilage metabolism, Neural tissue markers, Oncology

Amino Acid Sequence

TLNSVLNSNA IKNLPPPLGG AAGHPGSAVS AAPGILYPGG NKYQTIDNYQ PYPCAEDEEC GTDEYCASPT RGGDAGVQIC
LACRKRRKRC MRHAMCCPGN YCKNGICVSS DQNHFRGEIE ETITESFGND HSTLDGYSRR TTLSSKMYHT KGQEGSVCLR
SSDCASGLCC ARHFWSKICK PVLKEGQVCT KHRRKGSHGL EIFQRCYCGE GLSCRIQKDH HQASNSSRLH TCQRH

Source

HEK293 cells

Purity

97%

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 200 ng/ml.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C

Storage, Stability/Shelf Life

-20°C

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