

DKK-1, Human CellExp™, Human Recombinant

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| CATALOG #: | 7132-10 | 10 µg |
| | 7132-50 | 50 µg |
| ALTERNATE NAMES: | Dickkopf-related protein-1, Dickkopf-1, SK | |
| SOURCE: | HEK293 cells | |
| PURITY: | ≥ 97% by SDS-PAGE gel and HPLC analyses | |
| MOL. WEIGHT: | 35-40 kDa | |
| ENDOTOXIN LEVEL: | < 0.1 ng/µg of protein (<1EU/µg). | |
| FORM: | Lyophilized | |
| FORMULATION: | Sterile filtered through a 0.2 micron filter. Lyophilized from 1X PBS, pH 7.5. | |
| STORAGE CONDITIONS: | Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles. | |

RECONSTITUTION:

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. 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.

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 /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.

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.

AMINO ACID SEQUENCE:

TLNSVLNSNA IKNLPPPLGG AAGHPGSAVS AAPGILYPPG NKYQTIDNYQ
PYPCAEDEEC GTDEYCASPT RGGDAGVQIC LACRKRKRC MRHAMCCPGN
YCKNGICVSS DQNHFRGEIE ETITESFGND HSTLDGYSRR TTLSSKMYHT
KGQEGSVCLR SSDCASGLCC ARHFWSKICK PVLKEGQVCT KHRRKGSGL
EIFQRCCYCGE GLSCRIQKDH HQASNSSLRH TCQRH

RELATED PRODUCTS:

- DKK1 Antibody (**Cat. No. 3851-100**)
- DKK1 Blocking Peptide (**Cat. No. 3851BP-50**)
- DKK2 Antibody (**Cat. No. 3802-100**)
- DKK2 Blocking Peptide (**Cat. No. 3802BP-50**)
- DKK3 Antibody (**Cat. No. 3893-100**)
- DKK3 Blocking Peptide (**Cat. No. 3893BP-50**)
- DKK4 Antibody (**Cat. No. 3894-100**)
- DKK4 Blocking Peptide (**Cat. No. 3894BP-50**)

FOR RESEARCH USE ONLY! Not to be used in humans.