

AR31144PU-S

Human Dickkopf-2 (DKK2) - Purified

Alternate names:

Dickkopf-related protein 2, Dkk-2

Quantity:

2 µg

Background:

The *Dickkopf* (DKK)-related protein family is comprised of four central members, DKK-1 - 4, along with the distantly-related DKK family member DKK-11 (Soggy), which is thought to be a descendent of an ancestral DKK-3 precursor due to its unique sequence homology to DKK-3 and no other DKK family member. DKK family members, with the exception of the divergent Soggy, share two conserved cysteine-rich domains and show very little sequence similarity outside of these domains. Playing an important regulatory role in vertebrate development through localized inhibition of Wnt regulated processes, including anterior-posterior axial patterning, limb development, somitogenesis, and eye formation, DKKs have also been implicated post-developmentally in bone formation, bone disease, cancer, and neurodegenerative diseases. DKK proteins typically 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. DKK-2 has been shown to both inhibit and enhance canonical Wnt signaling; enhancing Wnt signaling through direct high-affinity binding of DKK-2 to LRP6 during LRP6 overexpression, while inhibiting Wnt signaling and promoting LRP6 internalization through the formation of a ternary complex between DKK-2, LRP6, and Kremen-2.

Uniprot ID:

[Q9UBU2](#)

NCBI:

[NP_055236.1](#)

GeneID:

[27123](#)

Species:

Human

Source:

CHO cells

Format:

State: Lyophilized (0.2µ Sterile filtered) purified protein
Purity: >98% pure by SDS-PAGE and HPLC analyses

Description:

Recombinant Human DKK-2 expressed in CHO cells is a glycoprotein that has a calculated molecular weight of 25.8 kDa and contains 234 amino acid residues. Due to glycosylation, human DKK-2 migrates at an apparent molecular weight of approximately 31-36 kDa by SDS-PAGE analysis under non-reducing conditions.

AA Sequence:

SQIGSSRAKL NSIKSSLGGE TPGQAANRSA GMYQGLAFGG SKKGKNLGQA YPCSSDKECE
VGRYCHSPHQ GSSACMVCRR KKKRCHRDGM CCPSTRCNG ICIPVTESIL TPHIPALDGT
RHRDRNHGHY SNHDLGWQNL GRPHTKMSHI KGHEGDPCLR SSDCIEGFCC ARHFWTKICK
PVLHQGEVCT KQRKKGSHGL EIFQRCDCAK GLSCKVWKDA TYSSKARLHV CQKI

Biological Activity: Determined by its ability to inhibit alkaline phosphatase activity in differentiating MC3T3 E1 cells. The expected ED₅₀ for this effect is 0.5– 1.0 µg/ml.

Molecular weight: 25.8 kDa

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month
or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.