

AR31165PU-N

Human Dickkopf-3 (DKK3) - Purified

Alternate names:

Dickkopf-related protein 3, Dkk-3, REIC

Quantity:

10 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-3 has been shown to potentiate, rather than inhibit, Wnt signaling through interactions with the high-affinity, transmembrane coreceptors Kremen-1 (Krm1) and Kremen-2 (Krm2).

Uniprot ID:
[Q9QUN9](#)
NCBI:
[NP_056629.1](#)
GeneID:
[50781](#)
Species:

Human

Source:

CHO cells

Format:
State: Lyophilized purified protein

Purity: >98% by SDS-PAGE & HPLC analysis

Stabilizers: None

Reconstitution: We recommended a quick spin followed by reconstitution in water to a concentration of 0.1-1.0 mg/ml.

This solution can be diluted into other aqueous buffers and stored at 4°C for one week or at -20°C for future use.

Description:

Recombinant human DKK-3 expressed in CHO cells is a glycoprotein that has a calculated molecular weight of 36.3 kDa and contains 329 amino acid residues. Due to glycosylation, human DKK-3 migrates at an apparent molecular weight of approximately 39-49 kDa by SDS-PAGE analysis under non-reducing conditions.

AA Sequence:

APAPTATSAP VKPGPALSYP QEEATLNEMF REVEELMEDT QHKLRSAAVEE MEAEAAAAKA
SSEVNLANLP PSYHNETNTD TKVGNNTIHV HREIHKITNN QTGQMVFSET VITSVGDEEG
RRSHECIIDE DCGPSMYCQF ASFQYTCQPC RGQRMLCTRD SECCGDQLCV WGHCTKMATR
GSGNTICDNQ RDCQPGGLCCA FQRGLLPVC TPLPVEGELC HDPASRLDL ITWELEPDGA

LDRCPCASGL LCQPHSHSLV YVCKPTFVGS RDQDGEILLP REVPDEYEVG SFMEEVQRQL
EDLERSLTEE MALREPAAA AAALLGGEEI

Biological Activity: Determined by its ability to inhibit alkaline phosphatase activity in differentiating MC3T3 E1 cells. The expected ED50 for this effect is 2.0–4.0 ng/ml.

Molecular weight: 39-49 kDa

Add. Information:

Centrifuge vials before opening!

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.