

## 32-20582: Recombinant Human DKK-3(Discontinued)

**Alternative Name :** Dickkopf-related protein 3, Dickkopf-3, REIC

### Description

#### Source:CHO cells

The dickkopf (DKK)-related protein family is comprised of four central members, DKK-1 - 4, along with the distantly-related DKK family member DKK-L1 (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/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. LRP5 and LRP6 are single-pass transmembrane proteins that appear to act as co-receptors for Wnt ligands involved in the Wnt/Beta -catenin signaling cascade. DKK-3 has been shown to potentiate, rather than inhibit, Wnt signaling through interactions with the high-affinity, transmembrane co-receptors Kremen-1 (Krm1) and Kremen-2 (Krm2). 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.

### Product Info

**Amount :** 2 µg / 10 µg

**Purification :** Purity:>= 98% by SDS-PAGE gel and HPLC analyses.

**Content :** This recombinant protein is supplied in lyophilized form.

**Amino Acid :** APAPTATSAP VKPGPALSYP QEEATLNEMF REVEELMEDT QHKLRSAVEE MEAEAAA AKA SSEVNLANLP  
PSYHNETNTD TKVGNNTIHV HREIHKITNN QTGQMVFSET VITSVGDEEG RRSHECIIDE DCGPSMYCQF  
ASFQYTCQPC RGQRMLCTRD SECCGDQLCV WGHCTKMATR GSNGTICDNQ RDCQPGLCCA  
FQRGLLFPVC TPLPVEGELC HDPASRLDL ITWELEPDGA LDRCPASGL LCQPHSHSLV YVCKPTFVGS  
RDQDGEILLP REVPDEYEVG SFMEEVRQEL EDLERSLTEE MALREPAAAA AALLGGEEI

### Application Note

Determined by its ability to inhibit alkaline phosphatase activity in differentiating MC3T3 E1 cells. The expected ED<sub>50</sub> for this effect is 2.0-4.0 ng/ml.