



Anti-human DKK-2

20160323BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-PA34
Size:	200 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits immunized with highly pure (>95%) recombinant human DKK-2 (Lys34-Ile259) derived from E. coli.

Target Background

Synonyms:	Dickkopf-related protein-2, Dickkopf-2, DKK2
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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. Recombinant Human DKK-2 fused to a C terminal His-tag derived from E. coli has a molecular weight of 26 kDa and contains 234 amino acid residues.

References

1. Krupnik VE et al, Gene 238:301 (1999)
2. Niehrs C, Oncogene 25:7469 (2006)

Database References Antigen

Protein RefSeq:	NP_055236.1
Uniprot ID:	Q9UBU2
mRNA RefSeq:	NM_014421.2

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human DKK-2
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot: Use 2-5 µg/ml
IF/IHC: IHC (human foreskin): 5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

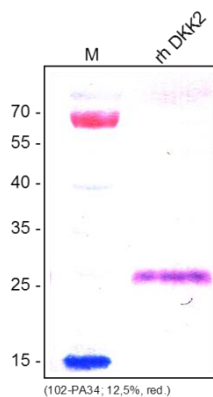


Figure 1: Western Analysis with recombinant human DKK-2. Samples were loaded in 12,5% SDS-polyacrylamide gel under reducing conditions.

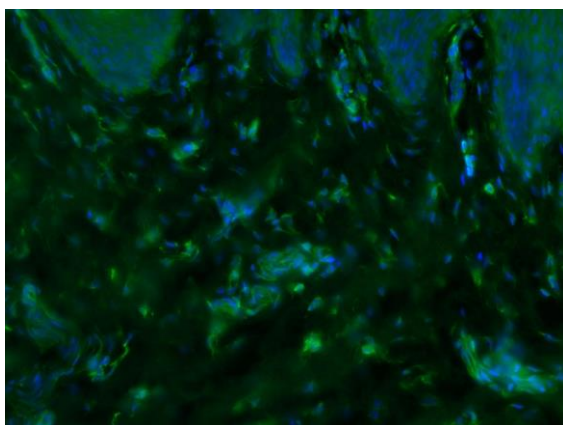


Figure 2: Immunofluorescence staining of human foreskin (cryo-section of PFA-fixed tissue) with anti-human DKK-2 (green; 5µg/ml). Nuclei counter-stained with Dapi (blue). Specimen provided by Prof. Dr. J. Wilting and Dr. K. Buttler, Goettingen.

The experiment was performed by the research group of Prof. Dr. J. Wilting, University Göttingen, Germany.