Anti-human DKK-1

20160323BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA33**
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-1 (Thr32-His266) derived from E. coli.

Target Background

Synonyms:	Dickkopf-related protein-1, Dickkopf-1, SK

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/βcatenin signaling system. LPR5 and LPR6 are single-pass transmembrane proteins that appear to act as co-receptors for Wnt ligands involved in the Wnt/βcatenin 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 fused to a C terminal His-tag derived from E. coli is a 26 kDa protein containing 235 amino-acid residues.

References

1. Fedi P et al, J Biol Chem 274:19465 (1999)
2. Krupnik VE et al, Gene 238:301 (1999)
3. Semenov MV et al, Curr Biol 11:951 (2001)
4. Niehrs C, Oncogene 25:7469 (2006)
5. Murrills RJ et al, J Cell Biochem 108:1066 (2009)
6. Bourhis E et al, J Biol. Chem. 285:9172 (2010)
7. Haniu M et al, Protein Sci 20:1802 (2011)
8. Ahn VE et al, Dev Cell 21:862 (2011)

Database References Antigen

Protein RefSeq:	NP_036374.1
Uniprot ID:	P94907
mRNA RefSeq:	NM_012242.2

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-1
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 1-5 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

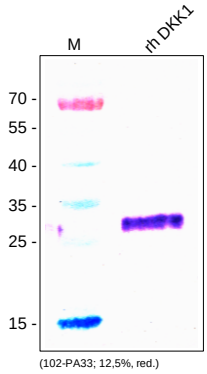

Figure 1: Western Analysis with recombinant human DKK-1. Samples were loaded in 12,5% SDS-polyacrylamide gel under reducing conditions.

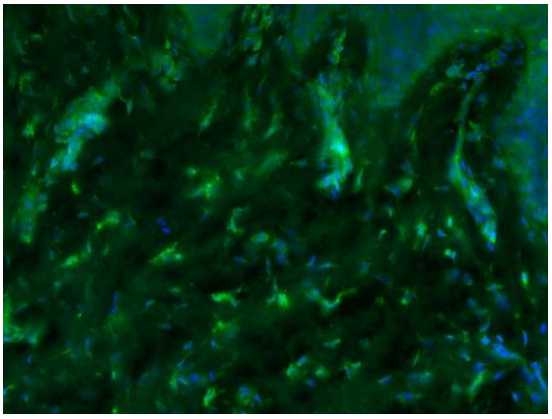

Figure 2: Immunofluorescence staining of human foreskin (cryo-section of PFA-fixed tissue) with anti-human DKK-1 (green; 5µg/ml). Nuclei counter-stained with Dapi (blue). Specimen provided by Prof. Dr. J. Wilting and Dr. K. Buttler, Goettingen.

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