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DKK3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1523a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9UBP4
Other Accession	NP_037385
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	38390
Antigen Region	15-45

Additional Information

Gene ID	27122
Other Names	Dickkopf-related protein 3, Dickkopf-3, Dkk-3, hDkk-3, DKK3, REIC
Target/Specificity	This DKK3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 15-45 amino acids from the N-terminal region of human DKK3.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DKK3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DKK3
Synonyms	REIC
Function	Antagonizes canonical Wnt signaling by inhibiting LRP5/6 interaction with Wnt and by forming a ternary complex with the transmembrane protein KREMEN that promotes internalization of LRP5/6. DKKs play an important role

	in vertebrate development, where they locally inhibit Wnt regulated processes such as antero-posterior axial patterning, limb development, somitogenesis and eye formation. In the adult, Dkks are implicated in bone formation and bone disease, cancer and Alzheimer disease (By similarity).
Cellular Location	Secreted.
Tissue Location	Highest expression in heart, brain, and spinal cord. {ECO:0000269|PubMed:10570958, ECO:0000269|Ref.4}

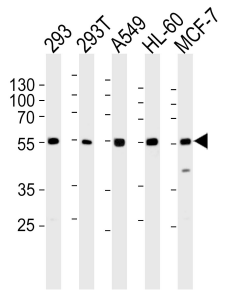
Background

DKK3, like DKK1, DKK2, and DKK4, possesses an N-terminal signal peptide and 2 conserved cysteine-rich domains, which are separated by a linker region and contain 10 cysteine residues each. The second cysteine region has a putative lipid-binding function that may facilitate WNT/DKK interactions at the plasma membrane. The linker region contains 50 to 55 amino acids in DKK1, DKK2, and DKK4, whereas in DKK3 it contains only 12 amino acids. All DKKs have several potential sites for cleavage by furin-type proteases. Northern blot analysis revealed wide expression of the DKK3 transcript, with highest expression in heart, brain, and spinal cord. In situ hybridization reveals highest expression in mouse brain, eye, and heart.

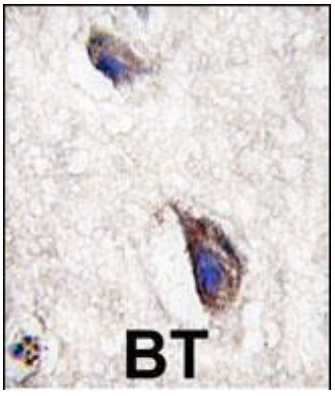
References

Clark, H.F., et al., Genome Res. 13(10):2265-2270 (2003).
Tsuji, T., et al., Biochem. Biophys. Res. Commun. 268(1):20-24 (2000).
Krupnik, V.E., et al., Gene 238(2):301-313 (1999).
Kobayashi, K., et al., Gene 282 (1-2), 151-158 (2002).

Images

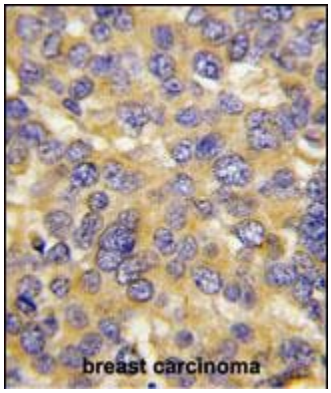


Western blot analysis of lysates from 293, 293T, A549, HL-60, MCF-7 cell line (from left to right), using DKK3 Antibody (A30)(Cat. # AP1523a). AP1523a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



Formalin-fixed and paraffin-embedded human brain tissue reacted with DKK3 antibody (N-term) (Cat.#AP1523a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Formalin-fixed and paraffin-embedded human breast



carcinoma tissue reacted with DKK3 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Dickkopf-3 links HSF1 and YAP/TAZ signalling to control aggressive behaviours in cancer-associated fibroblasts.
- Down-regulated REIC expression in lung carcinogenesis: a molecular target for gene therapy.
- Aberrant DKK3 expression in the oral leukoplakia and oral submucous fibrosis: a comparative immunohistochemical study.
- Wnt signalling in human breast cancer: expression of the putative Wnt inhibitor Dickkopf-3 (DKK3) is frequently suppressed by promoter hypermethylation in mammary tumours.
- Expression of Dickkopf genes is strongly reduced in malignant melanoma.