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DKK2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1522a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9UBU2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	28447
Antigen Region	31-62

Additional Information

Gene ID	27123
Other Names	Dickkopf-related protein 2, Dickkopf-2, Dkk-2, hDkk-2, DKK2
Target/Specificity	This DKK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-62 amino acids from the N-terminal region of human DKK2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	DKK2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DKK2
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 Expressed in heart, brain, skeletal muscle and lung

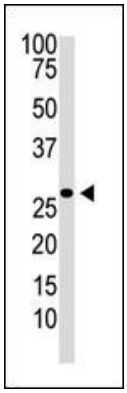
Background

The 259-amino acid DKK2 protein, like DKK1, DKK3, and DKK4, possesses an N-terminal signal peptide and 2 conserved cysteine-rich domains, which are separated by a linker region and contain 10 cys residues each. The second cys 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 expression of 4.0- and 4.5-kb DKK2 transcripts in heart, brain, skeletal muscle, and lung. Western blot analysis showed that DKK2 is secreted as a 15- to 17-kD protein. Functional analysis determined that DKK2 does not block Xenopus Wnt8 induction of a secondary axis in frog embryos.

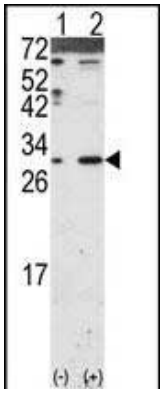
References

Clark, H.F., et al., Genome Res. 13(10):2265-2270 (2003). Brott, B.K., et al., Mol. Cell. Biol. 22(17):6100-6110 (2002). Krupnik, V.E., et al., Gene 238(2):301-313 (1999).

Images

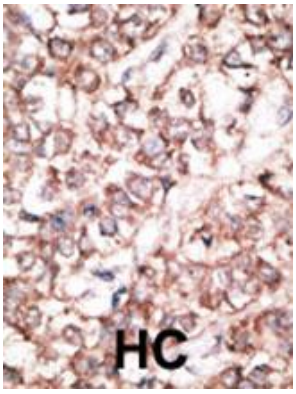


The anti-DKK2 Pab (Cat. #AP1522a) is used in Western blot to detect DKK2 in Jurkat cell lysate.

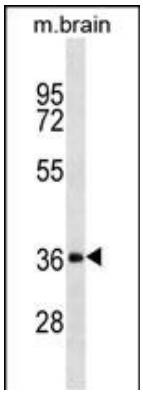


Western blot analysis of DKK2 (arrow) using DKK2 Antibody (N-term) (Cat.#AP1522a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the DKK2 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, 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. BC = breast carcinoma; HC = hepatocarcinoma.



DKK2 Antibody (T46) (Cat. #AP1522a) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the DKK2 antibody detected the DKK2 protein (arrow).

Citations

- Epigenetic silencing of DKK2 and Wnt signal pathway components in human ovarian carcinoma.
- Expression pattern of REIC/Dkk-3 in various cell types and the implications of the soluble form in prostatic acinar development.
- Wnt antagonist gene DKK2 is epigenetically silenced and inhibits renal cancer progression through apoptotic and cell cycle pathways.