

Rat DKK1 protein, His and GST tag

Cat. No. GTX00063-pro

Applications Functional Assay

Species Rat

Package

10 µg

Applications

Application Note

Dickkopf-related protein 1 (DKK1) is a protein which is a member of the dickkopf family. It is a secreted protein with two cysteine rich regions and is involved in embryonic development through its inhibition of the Wnt signaling pathway. Dickkopf WNT signaling pathway inhibitor 1 (Dkk1) is a protein-coding gene that acts from the anterior visceral endoderm. The dickkopf protein encoded by DKK1 is an antagonistic inhibitor of the WNT signaling pathway that acts by isolating the CTNNb1 co-receptor so that it cannot aid in activating the WNT signaling pathway. DKK1 was also demonstrated to antagonize the Wnt/ β -catenin pathway via a reduction in β -catenin and an increase in OCT4 expression. Besides, Low Density Lipoprotein Receptor Related Protein 5 (LRP5) has been identified as an interactor of DKK1 thus a binding ELISA assay was conducted to detect the interaction of recombinant rat DKK1 and recombinant rat LRP5. Briefly, DKK1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to LRP5-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-DKK1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of DKK1 and LRP5 was in a dose dependent manner.

Observed MW (kDa) 55 kDa.

Properties

Form Lyophilized powder

Buffer Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.

Preservative ProClin 300

Storage For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.

Region/Sequence N-terminal His and GST-Tag; Val36~Asn260 (NP_001099820.1)

Expression System E. coli

Purity > 97%

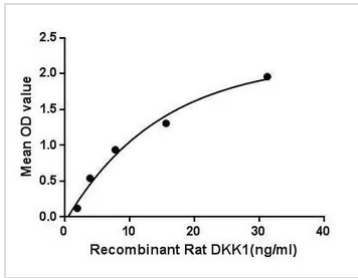
Endotoxin < 1 EU/µg

Conjugation Unconjugated

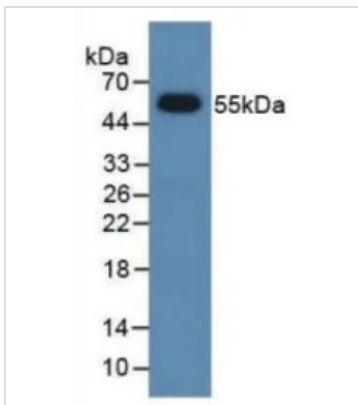
Note For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.



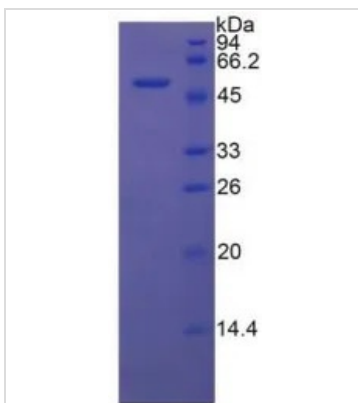
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DATA IMAGES

GTx00063-pro Functional Assay Image

Functional ELISA analysis of GTx00063-pro Rat DKK1 protein which can bind immobilized LRP5 protein.


GTx00063-pro Image

WB analysis of GTx00063-pro Rat DKK1 protein.


GTx00063-pro Image

SDS-PAGE analysis of GTx00063-pro Rat DKK1 protein.



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