For Research Use Only

Recombinant Human DKK1 protein (rFc Tag)

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Catalog Number: Eg3114

Basic Information

Species:
Human

Purity:
>90 %, SDS-PAGE

Tag:
rFc Tag

Technical Specifications

Purity:
>90 %, SDS-PAGE

Endotoxin Level:
<0.1 EU/ μ g protein, LAL method

Source:
HEK293-derived Human DKK1 protein Thr32-His266 (Accession# O94907) with a rabbit IgG Fc tag at the C-terminus.

GeneID:
22943

Accession:
O94907

Predicted Molecular Mass:
51.4 kDa

SDS-PAGE:
58-75 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μ m filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20℃ to -80℃ as lyophilized proteins.
- 3 months, -20℃ to -80℃ under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

DKK1 is a member of the DKK protein family. Other members of this family include DKK2, DKK3, and DKK4. The DKK family proteins share 35-40 % homology between various members. DKK1 is a secreted protein that functions as a negative regulator of Wnt/ β -catenin signaling pathway. Wnt/ β -catenin signaling pathway involves binding of the Wnt ligands to the seven-transmembrane receptor, Frizzled, and the coreceptor lipoprotein-related protein 5 and 6 (LRP5/6). DKK1 forms a ternary complex with LRP5/6 and another receptor, Kremen, followed by endocytosis of this complex and removal of LRP5/6 from the cell surface. It has been suggested that DKK1 permits anterior development by inhibiting Wnt/ β -catenin signaling, which is essential for posterior patterning in vertebrates. The balance between Wnt signaling and DKK1 inhibition is critical for bone formation and homeostasis and insufficient or excess DKK1 activity in bone results in increased or decreased bone density, respectively.

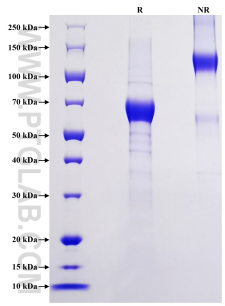
References

1. Niehrs, C. Oncogene vol. 25,57 (2006): 7469-81.
2. Mao, Bingyu et al. Nature vol. 417,6889 (2002): 664-7.
3. Krupnik, V E et al. Gene vol. 238,2 (1999): 301-13.

Synonyms

DKK1, Dickkopf 1, Dickkopf1, Dickkopf-1, Dickkopf-related protein 1

Selected Validation Data



Purity of Recombinant Human DKK1 was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.