

# HumanKine® DKK-1 (Recombinant Human)



Animal Component-Free

Human cell expressed

Tag-Free

Endotoxin Free

## Product Description

DKK-1 (Dickkopf WNT signaling pathway inhibitor 1) is a member of the DKK protein family. Other members of this family include DKK-2, DKK-3, and DKK-4. The DKK family proteins share 35-40 % homology between various members. Recombinant human DKK-1 expressed in HEK293 cells is a 35-45kDa glycosylated protein. It is a secreted protein that functions as a negative regulator of Wnt/  $\beta$ -catenin signaling pathway. Wnt/  $\beta$ -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 DKK-1 permits anterior development by inhibiting Wnt/  $\beta$ -catenin signaling, which is essential for posterior patterning in vertebrates. The balance between Wnt signaling and DKK-1 inhibition is critical for bone formation and

### Alternative Names

SK, Dickkopf-1, Dickkopf-related protein-1, mDkk-1

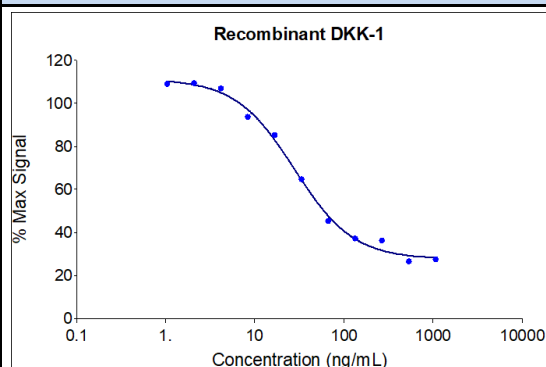
### Source

Human Embryonic Kidney cells (HEK293). HEK293-derived DKK-1 protein

## Specifications

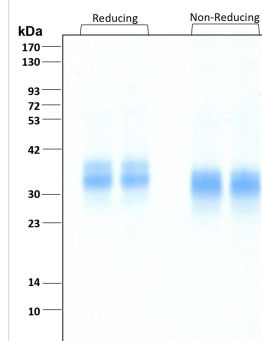
Test	Method	Specification
Activity	Dose-dependent luciferase production by Wnt3A in a HEK293 reporter cell line.	7-70 ng/mL
Molecular Mass	SDS-PAGE	37-51 kDa reduced, 35-49 non-reduced, monomer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<1 EU/ $\mu$ g

## Activity Data



Recombinant human DKK-1 (HZ-1314) inhibits dose-dependent luciferase production by Wnt3A in a HEK293 reporter cell line. Luciferase assay production was assessed by One-Step™ luciferase assay kit. HEK293 cells were treated with increasing amounts of DKK-1 as well as 150ng/mL of recombinant Wnt3A (HZ-1296) for 6 hours. The EC50 was determined using a 4-parameter non-linear

## SDS-PAGE



Preparation	
Shipping Temperature	ambient temperature
Formulation	1x PBS, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4 containing 0.1% endotoxin-free recombinant human serum albumin (HSA). Gently swirl or tap vial to mix.

Stability and Storage	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
Avoid repeated freeze-thaw cycles.			

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