

DKK-1 Protein, Human (HEK293, His)

Cat. No.:	HY-P7155A
Synonyms:	rHuDKK-1; hDkk-1; SK
Species:	Human
Source:	HEK293
Accession:	O94907 (T32-R265)
Gene ID:	22943
Molecular Weight:	Approximately 35-50 kDa due to the glycosylation

PROPERTIES

AA Sequence	<pre> T L N S V L N S N A I K N L P P P L G G A A G H P G S A V S A A P G I L Y P G G N K Y Q T I D N Y Q P Y P C A E D E E C G T D E Y C A S P T R G G D A G V Q I C L A C R K R R K R C M R H A M C C P G N Y C K N G I C V S S D Q N H F R G E I E E T I T E S F G N D H S T L D G Y S R R T T L S S K M Y H T K G Q E G S V C L R S S D C A S G L C C A R H F W S K I C K P V L K E G Q V C T K H R R K G S H G L E I F Q R C Y C G E G L S C R I Q K D H H Q A S N S S R L H T C Q R </pre>
Biological Activity	<ol style="list-style-type: none"> The ED₅₀ is <4 µg/mL as measured in stimulation of alkaline phosphatase activity using CCL-226 cells. Measured by its ability to inhibit Wnt3a-induced alkaline phosphatase production by C3H10T1/2 cells. The ED₅₀ for this effect is approximately 0.1-0.8 µg/mL in the presence of 10 ng/mL of mouse Wnt3a.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Human Dickkopf Related Protein-1 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
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pathway inhibitor 1 (Dkk1) is a protein-coding gene that acts from the anterior visceral endoderm^{[1][2]}. DKK1 is demonstrated to antagonize the Wnt/ β -catenin pathway via a reduction in β -catenin and an increase in OCT4 expression^[3].

REFERENCES

- [1]. Schneider VA, et al. Spatially distinct head and heart inducers within the *Xenopus* organizer region. *Curr Biol.* 9: 800–809.
- [2]. Mukhopadhyay M, et al. Dickkopf1 is required for embryonic head induction and limb morphogenesis in the mouse. *Developmental Cell.* 1 (3): 423–34.
- [3]. Ou L, et al. Dickkopf Wnt signaling pathway inhibitor 1 regulates the differentiation of mouse embryonic stem cells in vitro and in vivo. *Molecular Medicine Reports.* 13 (1): 720–30.
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Caution: Product has not been fully validated for medical applications. For research use only.

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