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Recombinant Human Dickkopf Homolog 1 (DKK1)

Publication Number MAN0003489 **Revision Date** 08 August 2011

Catalog Number:	PHC9214	PHC9215	PHC9211	PHC9213
Quantity:	10 µg	25 µg	100 µg	1 mg

Lot Number:	See product label.
Molecular Weight:	42 kDa
Purity:	>95% as determined by SDS–PAGE analysis.
Amino Acid Sequence:	TLNSVLNSNA IKNLPPPLGG AAGHPGSAVS AAPGILYPGG NKYQTIDNYQ PYPCAEDEEC GTDEYCASPT RGGDAGVQIC LACRKRRKRC MRHAMCCPGN YCKNGICVSS DQNHFRGEIE ETITESFGND HSTLDGYSRR TTLSSKMYHT KGQEGSVCLR SSDCASGLCC ARHFWSKICK PVLKEGQVCT KHRRKGSHGL EIFQRCYCGE GLSCRIQKDH HQASNSSRLH TCQRH
Biological Activity:	In a functional ELISA, immobilized recombinant human LRP6/Fc chimera receptor (3 µg/mL, 100 µL/well) will bind recombinant human DKK1 with linear range of 0.3–40 ng/mL.
Formulation:	Lyophilized, carrier free.
Sterility:	Filtered prior to lyophilization through a 0.22 micron sterile filter.
Endotoxin:	<0.1 ng/µg
Production:	Recombinant human DKK1 is expressed in Human Embryonic Kidney 293 cells and purified via sequential chromatography.
Reconstitution Recommendation:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute lyophilized recombinant human DKK1 in sterile, distilled water to a concentration of 0.1–0.5 mg/mL. Further dilutions should be made in low endotoxin medium or a buffered solution containing a carrier protein such as heat inactivated FCS or tissue culture grade BSA.
Suggested Working Dilutions:	The optimal concentration should be determined for each specific application.
Storage:	Store lyophilized human DKK1 at 2 to 8°C, preferably desiccated. Upon reconstitution, apportion into working aliquots and store at ≤ –20°C. Avoid repeated freeze/thaw cycles.
Expiration Date:	Expires one year from date of receipt when stored as instructed.
Biological Function:	Dickkopf Homolog 1 (DKK1) is a 266 amino acid secreted protein containing a 31 amino acid signal sequence and two cysteine rich regions. DKK1 is involved in embryonic development through its inhibition of the Wnt/β–catenin signaling pathway. DKK1 binds to the Wnt co-receptors LRP5/6 and is a high affinity ligand for the transmembrane proteins Kremen1 and 2. These proteins can form a ternary complex with DKK1/LRP6 and thus modulate Wnt signaling. DKK1 has been shown to promote proliferation of mesenchymal stem cells (MSC) and block their differentiation.
References:	Glinka, A., W. Wu, H. Delius, A. P. Monaghan, C. Blumenstock, and C. Niehrs (1998) Dickkopf-1 is a member of a new family of secreted proteins and functions in head induction. Nature, 391:357–362. Mao, B., W. Wu, Y. Li, D. Hoppe, P. Stannek, A. Glinka, and C. Niehrs. (2001) LDL-recptor-related protein 6 is a receptor for Dickkopf proteins. Nature, 411_321–325. Mao, B., W. Wu, G. Davidson, J. Marhold, M. Li, B. Mechler, H. Delius, D. Hoppe, P. Stannek, C. Walter, A. Glinka, and C. Niehrs. (2002) Kremen proteins are Dickkopf receptors that regulate Wnt/β-catenin signaling. Nature, 417:664–667. Pinzone, J., B. Hall, N. Thudi, M. Vonau, Y. Qiang, T. rosol, and J. Shaughnessy. (2009) The role of Dickkopf-1 in bone development, homeostasis, and disease. Blood, 113:517–525.

Explanation of Symbols

The symbols present on the product label are explained below:

Symbol	Description
REF	Catalog Number
RUO	Research Use Only
	Use by
	Manufacturer
[–]	Without, does not contain
	Protect from light
	Directs the user to consult instructions for use (IFU), accompanying the product.

Symbol	Description
LOT	Batch code
IVD	In vitro diagnostic medical device
	Temperature limitation
EC REP	European Community authorized representative
[+]	With, contains
⚠	Consult accompanying documents

Limited Use Label License: Research Use Only

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