

**DATASHEET**

Version 2016-08-02

**DKK-1, Human****Cat. No.:** Z03233-1**Size:** 1 mg**Synonyms:** DKK-1, Human**Description:**

**Dickkopf related protein 1 (DKK1)** is a chemokine that belongs to the DKK protein family, which also includes DKK-2, DKK-3 and DKK-4. DKK-1 was originally identified as a *Xenopus* head forming molecule that behaves as an antagonist for Wnt signaling. It is one of the most up-regulated genes during androgen-potentiated balding, with DKK-1 messenger RNA up-regulated a few hours after DHT treatment of hair follicles at the dermal papilla *in vitro*. Neutralizing bodies against DKK-1 reverses DHT effects on outer root sheath keratinocytes. DKK-1 expression is attenuated by L-threonate, a metabolite of ascorbate *in vitro*. DKK1 promotes LRP6 internalization and degradation as it forms a ternary complex with the cell surface receptor Kremen. DKK1 not only functions as a head inducer during development, but also regulates joint remodeling and bone formation, which indicate its role in the pathogenesis of rheumatoid arthritis and multiple myeloma.

**Amino Acid Sequence:**

TLNSVLNSNA IKNLPPPLGG AAGHPGSAVS AAPGILYPPG

NKYQTIDNYQ PYPCAEDEEC GTDEYCASPT  
RGGDAGVQIC LACRKRRC MRHAMCCPGN  
YCKNGICVSS DQNHFRGEIE ETITESFGND HSTLDGYSRR  
TTLSSKMYHT KGQEGSVCLR SSDCASGLCC  
ARHFWSKICK PVLKEGQVCT KHRRKGSGL EIFQR CYCGE  
GLSRIQKDH HQASNSSLRH TCQRH**Source:** CHO**Species:** Human**Biological Activity:** ED<sub>50</sub> < 6 µg/ml, measured in stimulation of alkaline phosphatase activity using CCI-226 cells. Up to 180% stimulation of alkaline phosphatase activity was observed at 10.0 µg/ml.**Molecular Weight:** 17-22 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS at 100 µg/ml.**Purity:** > 95% as analyzed by SDS-PAGE.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant **human DKK1 (rhDKK1)** remains stable up to 6 months at -80°C from date of receipt. Upon reconstitution, rhDKK1 should be stable up to 1 week at 4°C or up to 2 months at -20°C.

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