

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant DKK-1, Human

Catalog Number: BK0023-1mg

Source: Escherichia coli.

Quantity: 1mg

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.

Molecular Weight:

17-22 kDa, observed by reducing SDS-PAGE.

Purity:

> 95% as analyzed by SDS-PAGE.

Biological Activity:

ED50 < 6 µg/ml, measured in stimulation of alkaline phosphatase activity using CCl-226 cells. Up to 180% stimulation of alkaline phosphatase activity was observed at 10.0 µg/ml.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized after extensive dialysis against PBS.

AA Sequence:

TLNSVLNSNAIKNLPPPLGGAAGHPG-
SAVSAAPGILYPGGNKYQTIDNYQPYPCAEDEEC
GTDEYCASPTRGGDAGVQICLACRKR-
KRCMRHAMCCPGNYCKNGICVSSDQNHFRGEIE
ETITESFGNDHSTLDGYSRRTTLSSKMYHT-
KGQEGSVCLRSSDCASGLCCARHFWSKICK
PVLKEGVCTKHRRKGSHGLEIFQR-
CYCGEGLSRIQKDHQASNSSRLHTCQRH

Endotoxin:

< 0.2 EU/µg, determined by LAL method.

Reconstitution:

Reconstituted in ddH₂O or PBS at 100 µg/ml.

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.

Usage:

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