

# DKK-1

Catalog # PVGS1573

## Product Information

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| <b>Primary Accession</b>       | <a href="#">O94907</a>   |
| <b>Species</b>                 | Human  |
| <b>Sequence</b>                | Thr32-His266   |
| <b>Purity</b>                  | > 95% as analyzed by SDS-PAGE  |
| <b>Endotoxin Level</b>         |  |
| <b>Biological Activity</b>     | ED <sub>50</sub>   |
| <b>Expression System</b>       | HEK 293  |
| <b>Formulation</b>             | Lyophilized from a 0.2 µm filtered solution in PBS.  |
| <b>Reconstitution</b>          | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH <sub>2</sub> O or PBS up to 100 µg/ml.  |
| <b>Storage &amp; Stability</b> | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| <b>Gene ID</b>           | 22943   |
| <b>Other Names</b>       | Dickkopf-related protein 1, Dickkopf-1, Dkk-1, hDkk-1, SK, DKK1   |
| <b>Target Background</b> | Dickkopf related protein 1 (DKK-1) 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. DKK-1 promotes LRP6 internalization and degradation as it forms a ternary complex with the cell surface receptor Kremen. DKK-1 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. |

## Protein Information

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| <b>Name</b>              | DKK1   |
| <b>Function</b>          | Antagonizes canonical Wnt signaling by inhibiting LRP5/6 interaction with Wnt and by forming a ternary complex with the transmembrane protein KREMEN that promotes internalization of LRP5/6 (PubMed: <a href="#">22000856</a> ). DKKs play an important role in vertebrate development, where they locally inhibit Wnt regulated processes such as antero-posterior axial patterning, limb development, somitogenesis and eye formation. In the adult, Dkks are implicated in bone formation and bone disease, cancer and Alzheimer disease (PubMed: <a href="#">17143291</a> ). Inhibits the pro-apoptotic function of KREMEN1 in a Wnt-independent manner, and has anti-apoptotic activity (By similarity). |
| <b>Cellular Location</b> | Secreted.  |
| <b>Tissue Location</b>   | Placenta.  |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.