Data Sheet (Cat.No.TMPS-00020)

TargetMol

DKK1 Protein, Human, Recombinant

General Information

Synonyms: Dickkopf-1;DKK-1

Protein Construction: Thr32-His266

Species: Human

Expression Host: HEK293 Cells

Accession: O94907

Molecular Weight: 38~40 kDa (Reducing conditions)

QC Testing

Biological Activity: ED 50 < 4.0 μg/ml, measured by its ability to inhibit Wnt3a induced alkaline phosphatase production by C3H10T1/2 cells.

Purity: > 95% as determined by SDS-PAGE

Endotoxin: < 0.2 EU/μg of protein as determined by the LAL method.

Formulation: Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 sits role in the pathogenesis of rheumatoid arthritis and multiple myeloma.

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