

Human NBL1 / DAND1 / DAN Protein (His Tag)

Catalog Number: 10169-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

D1S1733E; DAN; DAND1; NB; NO3; D4H1S1733E; DAN; Dana; NO3

Protein Construction:

A DNA sequence encoding the human DAN precursor (NP_005371.1) (Met 1-Asp 180) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit BMP4-induced activity in MC3T3-E1 Mouse osteoblastic cells. The ED₅₀ for this effect is typically 5-20 µg/ml in the presence of 50 ng/mL of recombinant human BMP4.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 16

Molecular Mass:

The recombinant human DAN consists of 176 amino acids and has a calculated molecular mass of 19.3 kDa. As a result of glycosylation, rh DAN migrates as an approximately 27 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

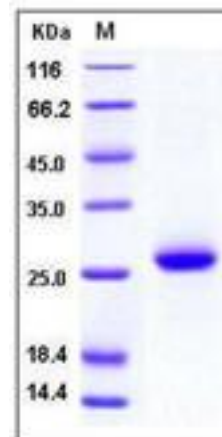
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The Dan (Differential screening-selected gene aberrative in neuroblastoma, also known as NO3) gene was first identified as the putative rat tumor suppressor gene and encodes a protein structurally related to Cerberus and Gremlin in vertebrates. It is a founding member of the DAN family of secreted proteins, acts as an inhibitor of cell cycle progression and is closely involved in retinoic acid-induced neuroblastoma differentiation. There are at least five mammalian protein members in the evolutionarily conserved Dan family including DAN, Gremlin/DRM, Cer1 (Cerberus-related), Dante and PRDC (protein related to DAN and cereberus), and share the C-terminal cystine-knot motif. As a secreted glycoprotein, DAN is a member of a class of glycoproteins shown to be secreted inhibitors of the transforming growth factor-beta (TGF-beta) and bone morphogenic protein pathways. It binds to BMPs and preventing their interactions with signaling receptor complexes, and accordingly regulates the processes of embryonic development and tissue differentiation. DAN gene product may have an important role in regulation of the entry of cells into the S phase. In addition, DAN gene product possesses an ability to revert phenotypes of transformed rat fibroblasts and represents a candidate tumour suppressor gene for neuroblastoma.

References

- 1.Ozaki T, *et al.* (1995) Overexpression of DAN gene product in normal rat fibroblasts causes a retardation of the entry into the S phase. *Cancer Res.* 55(4): 895-900.
- 2.Nakamura Y, *et al.* (1997) A product of DAN, a novel candidate tumour suppressor gene, is secreted into culture medium and suppresses DNA synthesis. *Eur J Cancer.* 33(12): 1986-90.
- 3.Ogita J, *et al.* (2001) Expression of the Dan gene during chicken embryonic development. *Mech Dev.* 109(2): 363-5.

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