

Human TCN2 Protein (His Tag)

Catalog Number: 10566-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

D22S676; D22S750; II; TC; TC-2; TC2; TCII; AW208754; Tcn-2

Protein Construction:

A DNA sequence encoding the human TCN2 (NP_000346.2) (Met 1-Trp 427) with a C-terminal polyhistidine tag was expressed.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized human TCN2-His at 10µg/mL (100µL/well) can bind biotinylated mouse CD320-His (Cat:51138-M08H). The EC₅₀ of biotinylated mouse CD320-His (Cat:51138-M08H) is 18-42 ng/mL.

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: Glu 19

Molecular Mass:

The secreted recombinant human TCN2 comprises 418 amino acids with a predicted molecular mass of 46.7 kDa. It migrates with the molecular weight of approximately 43 kDa 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:

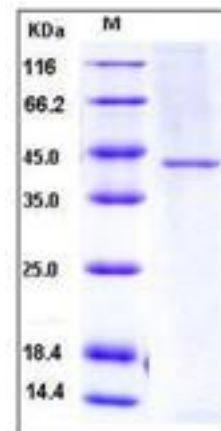
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Transcobalamin II, also known as TCN2 and TC II, is a plasma protein that binds cobalamin (Cbl; vitamin B12) as it is absorbed in the terminal ileum and distributes to tissues. The circulating transcobalamin II-cobalamin complex binds to receptors on the plasma membrane of tissue cells and is then internalized by receptor-mediated endocytosis. Transcobalamin II is a non-glycosylated secretory protein of molecular mass 43 kDa. Its plasma membrane receptor (TC II-R) is a heavily glycosylated protein with a monomeric molecular mass of 62 kDa. Human TCN2 gene is composed of nine exons and eight introns spanning approximately 20 kb with multiple potential transcription start sites. A number of genetic abnormalities are characterized either by a failure to express TCN2 or by synthesis of an abnormal protein. The TCN2 deficiency results in cellular cobalamin deficiency, an early onset of megaloblastic anaemia, and neurological abnormalities.

References

1. Rothenberg, S. P. et al., 1995, Baillieres Clin Haematol. 8 (3):499-514.
2. Bibi, H. et al., 1999, J Inher Metab Dis. 22 (7):765-772.
3. Seetharam, B. et al., 2000, Vitam Horm. 59 :337-366.

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