# Recombinant Protein Technical Manual

## Recombinant Human TCN2 Protein (His Tag)(Active)

**RPES1993**

## Product Data:

**Product SKU:** RPES1993

**Size:** 10µg

**Species**: Human

**Expression host:** HEK293 Cells

**Uniprot:** NP_000346.2

## Protein Information:

| | |
|---|---|
| **Molecular Mass:** | 46.7 kDa |
| **AP Molecular Mass:** | 43 kDa |
| **Tag:** | C-His |
| **Bio-activity:** | Measured by its binding ability in a functional ELISA. Immobilized human TCN2-His at 10µg/mL (100µL/well) can bind biotinylated mouse CD320-His. The EC50 of biotinylated mouse CD320-His is 18-42 ng/mL. |
| **Purity:** | > 90 % as determined by reducing SDS-PAGE. |
| **Endotoxin:** | < 1.0 EU per µg as determined by the LAL method. |
| **Storage:** | Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping:** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation:** | Lyophilized from sterile PBS, pH 7.4 |
| **Reconstitution:** | Please refer to the printed manual for detailed information. |
| **Application:** | Functional ELISA |
| **Synonyms:** | Transcobalamin-II;D22S676;D22S750;II;TC;TC-2;TC2;TCII |

## Immunogen Information:

**Sequence:** Met 1-Trp 427

## Background:

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-glycolated 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.