

Human TERF1 / TRF1 Protein (His Tag)

Catalog Number: 13044-H07B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

FLJ41416; hTRF1-AS; PIN2; t-TRF1; TRBF1; TRF; TRF1; Pin2; Trbf1; Trf1

Protein Construction:

A DNA sequence encoding the human TERF1 isoform 2 (NP_003209.2) (Met 1-Asp 419) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

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: Met

Molecular Mass:

The recombinant human TERF1 consists of 438 amino acids and predicts a molecular mass of 50.5 kDa. It migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% gly

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:

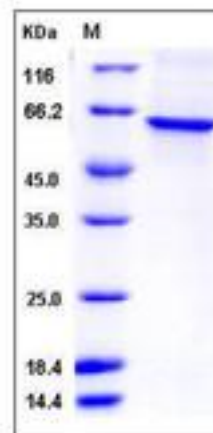
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Telomeric repeat binding factor 1 (TRF1), also known as TERF1, the shelterin complex, which modulates the telomere structures. TRF1 protein structure contains a C-terminal Myb motif, a dimerization domain near its N-terminus and an acidic N-terminus. Pin2/TRF1 was originally identified as a protein bound to telomeric DNA (TRF1) and as a protein involved in mitotic regulation (Pin2). Pin2/TRF1 negatively regulates telomere length and importantly, its function is tightly regulated during the cell cycle, acting as an important regulator of mitosis. TRF1 can be bound and modulated by two nucleolar GTP-binding proteins, nucleostemin (NS) and guanine nucleotide binding protein-like 3-like (GNL3L), which exhibit apparently opposite effects on the protein degradation of TRF1. TRF1/TERF1 may have association with cancer. TRF1 may play a significant role in cell differentiation in non-small cell lung cancer (NSCLC). The expression level of TRF1 protein is significantly reduced in kidney cancer and the level is negatively correlated with malignant degree of the cancer. TRF1 expression in malignant gliomas cells, may play a role in the malignant progression of astroglial brain tumors.

References

- 1.Tsai RY. (2009) Nucleolar modulation of TRF1: a dynamic way to regulate telomere and cell cycle by nucleostemin and GNL3L. *Cell Cycle*. 8(18):2912-6.
- 2.Chen YC, *et al.* (2009) Phosphorylation of telomeric repeat binding factor 1 (TRF1) by Akt causes telomere shortening. *Cancer Invest.* 27(1): 24-8.
- 3.Hu J, *et al.* (2006) Expression of telomeric repeat binding factor 1 in non-small cell lung cancer. *J Surg Oncol.* 93(1): 62-7.

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