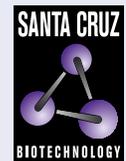


# THOC1 (E-10): sc-514123



The Power to Question

## BACKGROUND

THOC1 (THO complex subunit 1), also known as Tho1, P84, HPR1 or P84N5, is a 657 amino acid nuclear matrix protein and is evolutionarily conserved from yeast to humans. THOC1 contains one death domain and is a component of the heteromultimeric THO/TREX (transcription/export) complex along with THOC2, THOC3, BAT1 and ALY. The THO/TREX complex is recruited to transcribed genes and travels along with RNA polymerase II (Pol II) during elongation, coupling elongating Pol II with RNA splicing and export factors. THOC1 is expressed at high levels in breast cancer cells and at relatively low levels in normal epithelia. A reduction of THOC1 in cancer cell lines results in reduced cell proliferation. This suggests that cancer cells are dependent on the high levels of THOC1 expression and therefore THOC1 may be a good target for cancer therapy.

## REFERENCES

- Durfee, T., et al. 1994. The amino-terminal region of the retinoblastoma gene product binds a novel nuclear matrix protein that co-localizes to centers for RNA processing. *J. Cell Biol.* 127: 609-622.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606930. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Strässer, K., et al. 2002. TREX is a conserved complex coupling transcription with messenger RNA export. *Nature* 417: 304-308.

## CHROMOSOMAL LOCATION

Genetic locus: THOC1 (human) mapping to 18p11.32; Thoc1 (mouse) mapping to 18 A1.

## SOURCE

THOC1 (E-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of THOC1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514123 X, 200 µg/0.1 ml.

THOC1 (E-10) is available conjugated to agarose (sc-514123 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514123 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514123 PE), fluorescein (sc-514123 FITC), Alexa Fluor® 488 (sc-514123 AF488), Alexa Fluor® 546 (sc-514123 AF546), Alexa Fluor® 594 (sc-514123 AF594) or Alexa Fluor® 647 (sc-514123 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514123 AF680) or Alexa Fluor® 790 (sc-514123 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

THOC1 (E-10) is recommended for detection of THOC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for THOC1 siRNA (h): sc-76652, THOC1 siRNA (m): sc-76653, THOC1 shRNA Plasmid (h): sc-76652-SH, THOC1 shRNA Plasmid (m): sc-76653-SH, THOC1 shRNA (h) Lentiviral Particles: sc-76652-V and THOC1 shRNA (m) Lentiviral Particles: sc-76653-V.

THOC1 (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

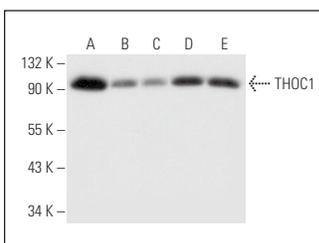
Molecular Weight of THOC1: 84 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, ZR-75-1 cell lysate: sc-2241 or MCF7 whole cell lysate: sc-2206.

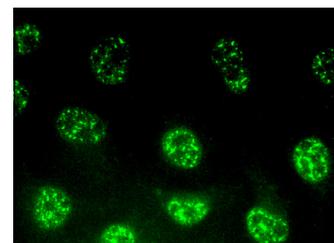
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



THOC1 (E-10): sc-514123. Western blot analysis of THOC1 expression in Jurkat (A), MDA-MB-231 (B), MDA-MB-468 (C), ZR-75-1 (D) and MCF7 (E) whole cell lysates.



THOC1 (E-10): sc-514123. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear speckle localization.

## SELECT PRODUCT CITATIONS

- Kliza, K.W., et al. 2021. Reading ADP-ribosylation signaling using chemical biology and interaction proteomics. *Mol. Cell* 81: 4552-4567.e8.
- Krantz, S., et al. 2021. Mitophagy mediates metabolic reprogramming of induced pluripotent stem cells undergoing endothelial differentiation. *J. Biol. Chem.* 297: 101410.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.