SANTA CRUZ BIOTECHNOLOGY, INC.

PTRF (4a): sc-517589

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The termination of transcription by RNA polymerase I (Pol I) requires the involvement of several proteins, including TTF-1 (thyroid transcription factor-1) which pauses transcription, thus allowing the Pol I complex to dissociate and release the subsequent pre-rRNA. PTRF (polymerase I and transcript release factor), also known as FKSG13, is a 390 amino acid protein that is required for the dissociation of the transcription complex. Localized to various places within the cell, including the cell membrane, microsome, nucleus and cytoplasm, PTRF binds the 3' end of pre-rRNA while simultaneously interacting with Pol I and TFF-1, thus allowing the Pol I complex to release from the template. Three isoforms of PTRF are expressed due to alternative splicing events.

REFERENCES

1. Mason, S.W., et al. 1997. Identification of a transcript release activity acting on ternary transcription complexes containing murine RNA polymerase I. EMBO J. 16: 163-172.
2. Jansa, P., et al. 1998. Cloning and functional characterization of PTRF, a novel protein which induces dissociation of paused ternary transcription complexes. EMBO J. 17: 2855-2864.
3. Hasegawa, T., et al. 2000. PTRF (polymerase I and transcript-release factor) is tissue-specific and interacts with the BFCOL1 (binding factor of a type-I collagen promoter) zinc-finger transcription factor which binds to the two mouse type-I collagen gene promoters. Biochem. J. 347: 55-59.

CHROMOSOMAL LOCATION

Genetic locus: PTRF (human) mapping to 17q21.31; Ptrf (mouse) mapping to 11 D.

SOURCE

PTRF (4a) is a mouse monoclonal antibody raised against amino acids 157-272 of PTRF of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PTRF (4a) is available conjugated to agarose (sc-517589 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-517589 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

PTRF (4a) is recommended for detection of PTRF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PTRF siRNA (h): sc-76293, PTRF siRNA (m): sc-76294, PTRF shRNA Plasmid (h): sc-76293-SH, PTRF shRNA Plasmid (m): sc-76294-SH, PTRF shRNA (h) Lentiviral Particles: sc-76293-V and PTRF shRNA (m) Lentiviral Particles: sc-76294-V.

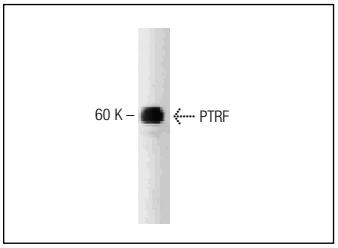
Molecular Weight of PTRF: 44 kDa.

Positive Controls: rat kidney extract: sc-2394 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY 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



PTRF (4a): sc-517589. Western blot analysis of PTRF expression in rat kidney tissue extract.

RESEARCH USE

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