SANTA CRUZ BIOTECHNOLOGY, INC.

# UBTFL1 (P-20): sc-324469

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*The Power to Question*

## BACKGROUND

The transcription of ribosomal RNA genes by RNA polymerase I (Pol I) is tightly coordinated with the growth state of the cell. In addition to Pol I, transcription of ribosomal genes requires the *trans*-activating factor UBF (upstream binding factor). UBF functions by binding to DNA elements within the RNA gene promoter and enhancer regions and directly associating with Pol I, tethering it to the promoter complex. Related to UBF, UBTFL1 (upstream-binding factor 1-like protein 1) is a 393 amino acid nuclear protein that contains 2 HMG box DNA-binding domains, which play important architectural roles in assembly of nucleoprotein complexes. The gene encoding UBTFL1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

## REFERENCES


1. Jantzen, H.M., et al. 1990. Nucleolar transcription factor hUBF contains a DNA-binding motif with homology to HMG proteins. Nature 344: 830-836.
2. Voit, R., et al. 1992. The nucleolar transcription factor mUBF is phosphorylated by casein kinase II in the C-terminal hyperacidic tail which is essential for transactivation. EMBO J. 11: 2211-2218.
3. Kuhn, A., et al. 1993. The nucleolar transcription activator UBF relieves Ku antigen-mediated repression of mouse ribosomal gene transcription. Nucleic Acids Res. 21: 2057-2063.
4. Codony-Servat, J., et al. 1996. The two isoforms of the 90-kDalton nucleolus organizer region autoantigen (upstream binding factor) bind with different avidity to DNA modified by the antitumor drug cisplatin. Biochem. Pharmacol. 51: 1131-1136.
5. Grummt, I. 1999. Regulation of mammalian ribosomal gene transcription by RNA polymerase I. Prog. Nucleic Acid Res. Mol. Biol. 62: 109-154.
6. Hannan, K.M., et al. 2000. Rb and p130 regulate RNA polymerase I transcription: Rb disrupts the interaction between UBF and SL-1. Oncogene 19: 4988-4999.
7. Panov, K.I., et al. 2001. A step subsequent to preinitiation complex assembly at the ribosomal RNA gene promoter is rate limiting for human RNA polymerase I-dependent transcription. Mol. Cell. Biol. 21: 2641-2649.
8. Lin, C.H., et al. 2006. Mass spectrometric identification of phosphorylation sites of rRNA transcription factor upstream binding factor. Am. J. Physiol., Cell Physiol. 292: C1617-C1624.
9. Meraner, J., et al. 2006. Acetylation of UBF changes during the cell cycle and regulates the interaction of UBF with RNA polymerase I. Nucleic Acids Res. 34:1798-1806.


## CHROMOSOMAL LOCATION

Genetic locus: Ubtfl1 (mouse) mapping to 9 A2.

## SOURCE

UBTFL1 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of UBTFL1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324469 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-324469 X, 200 µg/0.1 ml.

## APPLICATIONS

UBTFL1 (P-20) is recommended for detection of UBTFL1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 UBTFL1 siRNA (m): sc-141426, UBTFL1 shRNA Plasmid (m): sc-141426-SH and UBTFL1 shRNA (m) Lentiviral Particles: sc-141426-V.

UBTFL1 (P-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of UBTFL1: 46 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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