

# UBTFL1/3/5/6 (F-4): sc-398786

## 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. The UBTFL (upstream-binding factor 1-like protein 1) protein family is related to UBF. UBTFL1, UBTFL3 (also known as UBTFL5) and UBTFL6 each contain two HMG box DNA-binding domains and are located in the nucleus, therefore suggesting that they may be involved in the regulation of DNA-dependent processes such as DNA repair, replication and transcription. All of these processes require changing the confirmation of chromatin.

## REFERENCES

- Jantzen, H.M., et al. 1990. Nucleolar transcription factor hUBF contains a DNA-binding motif with homology to HMG proteins. *Nature* 344: 830-836.
- 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.
- Jones, K.A., et al. 1995. Localization of the human RNA polymerase I transcription factor gene (UBTF) to the D17S183 locus on chromosome 17q21 and construction of a long-range restriction map of the region. *Genomics* 30: 602-604.
- Matera, A.G., et al. 1997. Molecular cloning of the RNA polymerase I transcription factor hUBF/NOR-90 (UBTF) gene and localization to 17q21.3 by fluorescence *in situ* hybridization and radiation hybrid mapping. *Genomics* 41: 135-138.
- Thomas, J.O. 2001. HMG1 and 2: architectural DNA-binding proteins. *Biochem. Soc. Trans.* 29: 395-401.
- Weiss, M.A. 2001. Floppy SOX: mutual induced fit in hmg (high-mobility group) box-DNA recognition. *Mol. Endocrinol.* 15: 353-362.

## SOURCE

UBTFL1/3/5/6 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 109-138 within an internal region of UBTFL1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</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-398786 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-398786 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

UBTFL1/3/5/6 (F-4) is recommended for detection of UBTFL1, UBTFL3, UBTFL5 and UBTFL6 of human origin and UBTFL1 of mouse and rat 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 UBTFL1 siRNA (m): sc-141426, UBTFL1 shRNA Plasmid (m): sc-141426-SH and UBTFL1 shRNA (m) Lentiviral Particles: sc-141426-V.

UBTFL1/3/5/6 (F-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

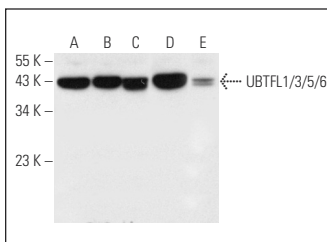
Molecular Weight of UBTFL1/3/5/6: 46/46/46/47 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HEK293 whole cell lysate: sc-45136 or human liver extract: sc-363766.

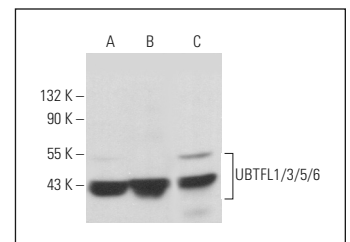
## RECOMMENDED SUPPORT REAGENTS

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



UBTFL1/3/5/6 (F-4): sc-398786. Western blot analysis of UBTFL1/3/5/6 expression in MCF7 (A), U-251-MG (B), HEK293 (C) whole cell lysates, human platelet extract (D) and human liver tissue extract (E).



UBTFL1/3/5/6 (F-4): sc-398786. Western blot analysis of UBTFL1/3/5/6 expression in MDA-MB-231 (A), BT-20 (B) and KNRK (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.