SANTA CRUZ BIOTECHNOLOGY, INC.

UTF1 (F-23): sc-130911

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UTF1 (undifferentiated embryonic cell transcription factor 1) is a 341 amino acid protein that localizes to the nucleus and is subject to post-translational phosphorylation. Associating with the TFIID complex via an interaction with the TATA box binding protein (TFIID), UTF1 binds to the N-terminal region of ATF-2 and, via this binding, acts as a transcriptional coactivator of ATF-2, thereby enhancing transcriptional activity. Human UTF1 shares 64% homology with its mouse counterpart, suggesting a similar role between species. The gene encoding UTF1 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. Okuda, A., et al. UTF1, a novel transcriptional coactivator expressed in pluripotent embryonic stem cells and extra-embryonic cells. EMBO J. 17: 2019-2032.
2. Fukushima, A., et al. 1998. Characterization of functional domains of an embryonic stem cell coactivator UTF1 which are conserved and essential for potentiation of ATF-2 activity. J. Biol. Chem. 273: 25840-25849.
3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604130. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Nishimoto, M., et al. 2001. Structural analyses of the UTF1 gene encoding a transcriptional coactivator expressed in pluripotent embryonic stem cells. Biochem. Biophys. Res. Commun. 285: 945-953.
5. Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-tooth disease. Neurogenetics 4: 1-15.
6. Chen, L. and Deng, C.X. 2005. Roles of FGF signaling in skeletal development and human genetic diseases. Front. Biosci. 10: 1961-1976.
7. Kristensen, D.M., et al. 2008. Presumed pluripotency markers UTF1 and Rex-1 are expressed in human adult testes and germ cell neoplasms. Hum. Reprod. 23: 775-782.

CHROMOSOMAL LOCATION

Genetic locus: UTF1 (human) mapping to 10q26.3.

SOURCE

UTF1 (F-23) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of UTF1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

UTF1 (F-23) is recommended for detection of UTF1 of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UTF1 siRNA (h): sc-76878, UTF1 shRNA Plasmid (h): sc-76878-SH and UTF1 shRNA (h) Lentiviral Particles: sc-76878-V.

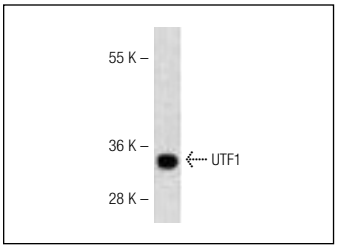
Molecular Weight of UTF1: 36 kDa.

Positive Controls: H460 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



UTF1 (F-23): sc-130911. Western blot analysis of UTF1 expression in H460 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wu, X.L. and Zheng, P.S. 2013. Undifferentiated embryonic cell transcription factor-1 (UTF1) inhibits the growth of cervical cancer cells by transactivating $p27^{Kip1}$. Carcinogenesis 34: 1660-1668.

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 or our catalog for detailed protocols and support products.