# UBA5 (h): 293T Lysate: sc-111232



The Power to Question

## **BACKGROUND**

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitinactivating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). UBA5 (Ubiquitin-activating enzyme 5), also known as UBE1DC1 or THIFP1, is a 404 amino acid protein that belongs to the E1-like ubiquitin-activating enzyme family. Existing as two alternatively spliced isoforms, UBA5 forms a high-energy thioester bond with UFM1 (ubiquitin-fold modifier 1), a protein involved in post-translational modification. Via formation of a thioester bond, UBA5 activates UFM1 function and may, thus, play a role in the regulation of post-translational modification events.

# **REFERENCES**

- Hartley, J.L., Temple, G.F. and Brasch, M.A. 2000. DNA cloning using in vitro site-specific recombination. Genome Res. 10: 1788-1795.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610552: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Komatsu, M., Chiba, T., Tatsumi, K., Iemura, S., Tanida, I., Okazaki, N., Ueno, T., Kominami, E., Natsume, T. and Tanaka, K. 2004. A novel protein-coniugating system for Ufm1, a ubiquitin-fold modifier. EMBO J. 23: 1977-1986.
- 4. Dou, T., Gu, S., Liu, J., Chen, F., Zeng, L., Guo, L., Xie, Y. and Mao, Y. 2005. Isolation and characterization of ubiquitin-activating enzyme E1-domain containing 1, UBE1DC1. Mol. Biol. Rep. 32: 265-271.
- Sasakawa, H., Sakata, E., Yamaguchi, Y., Komatsu, M., Tatsumi, K., Kominami, E., Tanaka, K. and Kato, K. 2006. Solution structure and dynamics of Ufm1, a ubiquitin-fold modifier 1. Biochem. Biophys. Res. Commun. 343: 21-26.
- Mizushima, T., Tatsumi, K., Ozaki, Y., Kawakami, T., Suzuki, A., Ogasahara, K., Komatsu, M., Kominami, E., Tanaka, K. and Yamane, T. 2007. Crystal structure of Ufc1, the Ufm1-conjugating enzyme. Biochem. Biophys. Res. Commun. 362: 1079-1084.
- 7. Zheng, M., Gu, X., Zheng, D., Yang, Z., Li, F., Zhao, J., Xie, Y., Ji, C. and Mao, Y. 2008. UBE1DC1, an ubiquitin-activating enzyme, activates two different ubiquitin-like proteins. J. Cell. Biochem. 104: 2324-2334.

# **CHROMOSOMAL LOCATION**

Genetic locus: UBA5 (human) mapping to 3q22.1.

#### **PRODUCT**

UBA5 (h): 293T Lysate represents a lysate of human UBA5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## **APPLICATIONS**

UBA5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive UBA5 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**