



## UBE2E1 (m): 293T Lysate: sc-124406

### BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. The first step requires the ATP-dependent activation of the Ub C-terminus and the assembly of multi-Ub chains by the Ub-activating enzyme known as the E1 component. The Ub chain is then conjugated to the Ub-conjugating enzyme (E2) to generate an intermediate Ub-E2 complex. The Ub-ligase (E3) then catalyzes the transfer of Ub from E2 to the appropriate protein substrate. UBE2E1 and UBE2L3, also designated UBCH6 and UBCH7 respectively in human, are E2 conjugating enzymes that interact with various proteins. Specifically, UBE2E1 interacts with the tumor suppressor protein TSSC5. UBE2L3 has been shown to mediate c-fos degradation, NF $\kappa$ B maturation, human papilloma virus-mediated p53 and Myc protein degradation.

### REFERENCES

1. Nuber, U., Schwarz, S., Kaiser, P., Schneider, R. and Scheffner, M. 1996. Cloning of human ubiquitin-conjugating enzymes UBCH6 and UBCH7 (E2-F1) and characterization of their interaction with E6-AP and RSP5. *J. Biol. Chem.* 271: 2795-2800.
2. Ardley, H.C., Moynihan, T.P., Markham, A.F. and Robinson, P.A. 2000. Pro-moter analysis of the human ubiquitin-conjugating enzyme including UBE2L3, which encodes UBCH7. *Biochim. Biophys. Acta* 1491: 57-64.
3. Ardley, H.C., Tan, N.G., Rose, S.A., Markham, A.F. and Robinson, P.A. 2001. Features of the parkin/ariadne-like ubiquitin ligase, its interaction with the ubiquitin-conjugating enzyme, UBCH7. *J. Biol. Chem.* 276: 19640-19647.
4. Passmore, L.A. and Barford, D. 2004. Getting into position: the catalytic mechanisms of protein ubiquitylation. *Biochem. J.* 379: 513-525.
5. Kuhlbrodt, K., Mouysset, J. and Hoppe, T. 2005. Orchestra for assembly and fate of polyubiquitin chains. *Essays Biochem.* 41: 1-14.
6. Takeuchi, T., Iwahara, S., Saeki, Y., Sasajima, H. and Yokosawa, H. 2006. Link between the ubiquitin conjugation system and the ISG15 conjugation system: ISG15 conjugation to the Ubch6 ubiquitin E2 enzyme. *J. Biochem.* 138: 711-719.
7. Yamada, H.Y. and Gorbsky, G.J. 2006. Tumor suppressor candidate TSSC5 is regulated by Ubch6 and a novel ubiquitin ligase RING105. *Oncogene* 25: 1330-1339.

### CHROMOSOMAL LOCATION

Genetic locus: Ube2e1 (mouse) mapping to 14 A3.

### PRODUCT

UBE2E1 (m): 293T Lysate represents a lysate of mouse UBE2E1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

### 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.

### APPLICATIONS

UBE2E1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive UBE2E1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

### 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.