



UBE2T (4E5): sc-100623

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 ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). UBE2T (ubiquitin-conjugating enzyme E2 T), also known as PIG50 or HSPC150, is a 197 amino acid member of the E2 ubiquitin-conjugating enzyme family. Involved in the protein degradation pathway, UBE2T catalyzes the ATP-dependent attachment of ubiquitin (Ub) to target proteins, thereby tagging them for subsequent destruction by the proteasome. Additionally, UBE2T is thought to be a crucial component of the Faconi anemia pathway of DNA damage repair and, upon self-inactivation, may negatively regulate the Faconi pathway.

REFERENCES

1. Andreassen, P.R., D'Andrea, A.D. and Taniguchi, T. 2004. ATR couples FANCD2 monoubiquitination to the DNA-damage response. *Genes Dev.* 18: 1958-1963.
2. Machida, Y.J., Machida, Y., Chen, Y., Gurtan, A.M., Kupfer, G.M., D'Andrea, A.D. and Dutta, A. 2006. UBE2T is the E2 in the Fanconi anemia pathway and undergoes negative autoregulation. *Mol. Cell* 23: 589-596.
3. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610538. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Zhang, Y., Zhou, X. and Huang, P. 2007. Fanconi anemia and ubiquitination. *J. Genet. Genomics* 34: 573-580.
5. Alpi, A., Langevin, F., Mosedale, G., Machida, Y.J., Dutta, A. and Patel, K.J. 2007. UBE2T, the Fanconi anemia core complex, and FANCD2 are recruited independently to chromatin: a basis for the regulation of FANCD2 monoubiquitination. *Mol. Cell. Biol.* 27: 8421-8430.
6. Zhang, J., Zhao, D., Wang, H., Lin, C.J. and Fei, P. 2008. FANCD2 monoubiquitination provides a link between the HHR6 and FA-BRCA pathways. *Cell Cycle* 7: 407-413.

CHROMOSOMAL LOCATION

Genetic locus: UBE2T (human) mapping to 1q32.1.

SOURCE

UBE2T (4E5) is a mouse monoclonal antibody raised against recombinant UBE2T of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

UBE2T (4E5) is recommended for detection of UBE2T 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 UBE2T siRNA (h): sc-78641, UBE2T shRNA Plasmid (h): sc-78641-SH and UBE2T shRNA (h) Lentiviral Particles: sc-78641-V.

Molecular Weight of UBE2T: 26 kDa.

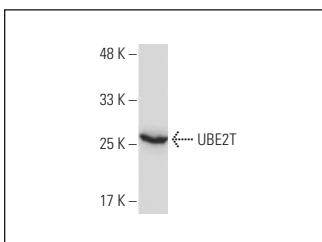
Positive Controls: HeLa whole cell lysate: sc-2200.

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).

DATA



UBE2T (4E5): sc-100623. Western blot analysis of UBE2T expression in HeLa whole cell lysate.

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.