

VCP (h): 293T Lysate: sc-112114

BACKGROUND

Valosin containing protein (VCP), also designated TERA (for transitional endoplasmic reticulum ATPase) or p97, is a member of the AAA family of ATPases, which are involved in a variety of cellular activities. VCP is the mammalian homolog of *Saccharomyces cerevisiae* Cdc48, a protein essential for the completion of mitosis in yeast. VCP is thought to be involved in a variety of membrane functions and in the regulation of the cell cycle. It associates with ubiquitinated I κ B- α as well as with the 26S Proteasome, indicating a potential role for VCP in the proteasome-mediated degradation of I κ B- α .

REFERENCES

1. Egerton, M., et al. 1992. VCP, the mammalian homolog of Cdc48, is tyrosine phosphorylated in response to T cell antigen receptor activation. *EMBO J.* 11: 3533-3540.
2. Egerton, M., et al. 1994. Biochemical characterization of valosin-containing protein, a protein tyrosine kinase substrate in hematopoietic cells. *J. Biol. Chem.* 269: 11435-11441.
3. Druck, T., et al. 1995. Chromosome localization of human genes for Clathrin adaptor polypeptides AP2 β and AP50 and the Clathrin-binding protein, VCP. *Genomics* 30: 94-97.
4. Confalonieri, F., et al. 1995. A 200 amino acid ATPase module in search of a basic function. *Bioessays* 17: 639-650.
5. Madeo, F., et al. 1998. Tyrosine phosphorylation regulates cell cycle-dependent nuclear localization of Cdc48p. *Mol. Biol. Cell* 9: 131-141.
6. Dai, R.M., et al. 1998. Involvement of valosin-containing protein, an ATPase co-purified with I κ B- α and 26S Proteasome, in ubiquitin-proteasome-mediated degradation of I κ B- α . *J. Biol. Chem.* 273: 3562-3573.
7. Zhang, S.H., et al. 1999. Identification of the cell cycle regulator VCP (p97/Cdc48) as a substrate of the band 4.1-related protein-tyrosine phosphatase PTPH1. *J. Biol. Chem.* 274: 17806-17812.
8. Ishigaki, S., et al. 2004. Physical and functional interaction between Dorfin and valosin-containing protein that are co-localized in ubiquitylated inclusions in neurodegenerative disorders. *J. Biol. Chem.* 279: 51376-51385.

CHROMOSOMAL LOCATION

Genetic locus: VCP (human) mapping to 9p13.3.

PRODUCT

VCP (h): 293T Lysate represents a lysate of human VCP transfected 293T cells and is provided as 100 μ g protein in 200 μ 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

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

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

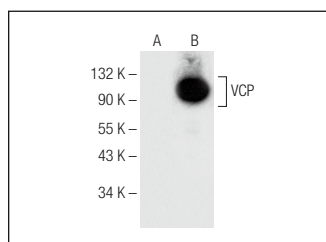
VCP (G-8): sc-374055 is recommended as a positive control antibody for Western Blot analysis of enhanced human VCP expression in VCP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

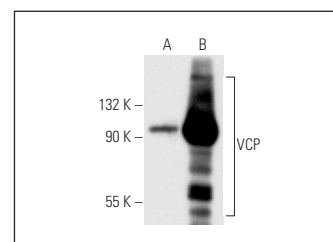
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



VCP (G-8): sc-374055. Western blot analysis of VCP expression in non-transfected: sc-117752 (A) and human VCP transfected: sc-112114 (B) 293T whole cell lysates.



VCP (D-9): sc-133212. Western blot analysis of VCP expression in non-transfected: sc-117752 (A) and human VCP transfected: sc-112114 (B) 293T whole cell lysates.

RESEARCH USE

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