

VCP (H-120): sc-20799

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. VCP 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. and Samelson, L.E. 1994. Biochemical characterization of valosin-containing protein, a protein tyrosine kinase substrate in hematopoietic cells. *J. Biol. Chem.* 269: 11435-11441.

CHROMOSOMAL LOCATION

Genetic locus: VCP (human) mapping to 9p13.3; Vcp (mouse) mapping to 4 A5.

SOURCE

VCP (H-120) is a rabbit polyclonal antibody raised against amino acids 687-806 mapping at the C-terminus of VCP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VCP (H-120) is recommended for detection of VCP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VCP (H-120) is also recommended for detection of VCP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VCP siRNA (h): sc-37187, VCP siRNA (m): sc-37188, VCP shRNA Plasmid (h): sc-37187-SH, VCP shRNA Plasmid (m): sc-37188-SH, VCP shRNA (h) Lentiviral Particles: sc-37187-V and VCP shRNA (m) Lentiviral Particles: sc-37188-V.

Molecular Weight of VCP: 97 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

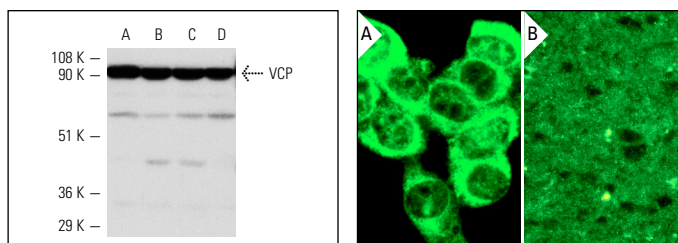
STORAGE

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

RESEARCH USE

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

DATA



VCP (H-120): sc-20799. Western blot analysis of VCP expression in NIH/3T3 (A), MDA-MB-231 (B), HeLa (C) and MCF7 (D) whole cell lysates.

VCP (H-120): sc-20799. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic staining (B).

SELECT PRODUCT CITATIONS

1. Giannakopoulos, N.V., et al. 2005. Proteomic identification of proteins conjugated to ISG15 in mouse and human cells. *Biochem. Biophys. Res. Commun.* 336: 496-506.
2. Acharya, P., et al. 2011. Liver cytochrome P450 3A endoplasmic reticulum-associated degradation: a major role for the p97 AAA ATPase in cytochrome P450 3A extraction into the cytosol. *J. Biol. Chem.* 286: 3815-3828.
3. Basco, D., et al. 2011. Absence of aquaporin-4 in skeletal muscle alters proteins involved in bioenergetic pathways and calcium handling. *PLoS ONE* 6: e19225.
4. Cayli, S., et al. 2011. Developmental expression of p97/VCP (Valosin-containing protein) and Jab1/CSN5 in the rat testis and epididymis. *Reprod. Biol. Endocrinol.* 9: 117.
5. Valle, C.W., et al. 2011. Critical role of VCP/p97 in the pathogenesis and progression of non-small cell lung carcinoma. *PLoS ONE* 6: e29073.
6. Haines, D.S., et al. 2012. Protein interaction profiling of the p97 adaptor UBXD1 points to a role for the complex in modulating ERGIC-53 trafficking. *Mol. Cell. Proteomics* 11: M111.
7. Sigglekow, N.D., et al. 2012. Mutated in colorectal cancer protein modulates the NF κ B pathway. *Anticancer Res.* 32: 73-79.
8. Marshall, K.D., et al. 2014. Proteomic mapping of proteins released during necrosis and apoptosis from cultured neonatal cardiac myocytes. *Am. J. Physiol. Cell Physiol.* 306: C639-C647.

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Try **VCP (D-9): sc-133212** or **VCP (F-5): sc-133211**, our highly recommended monoclonal alternatives to VCP (H-120).