Anti-VCP Antibody

ER30603

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Zebrafish
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 89 kDa

Description: Valosin-containing protein (VCP) is a highly conserved, that belongs to the AAA (ATPase associated with a variety of cellular activities) family of proteins. It is necessary for the fragmentation of Golgi stacks during mitosis and for their reassembly after mitosis. VCP is involved in the formation of the transitional endoplasmic reticulum (tER). VCP homo-hexamers associate with a variety of protein cofactors to form many distinct protein complexes, which act as chaperones to unfold proteins and transport them to specific cellular compartments or to the proteosome.

Immunogen: Synthetic peptide within human VCP aa 757-806 / 806.

Positive control: A549 cell lysate, MCF7 cell lysate, HeLa cell lysate, Jurkat cell lysate, A431 cell lysate, L929 cell lysate, F9 cell lysate, NIH/3T3 cell lysate, Neuro-2a cell lysate, mouse heart tissue lysate, mouse brain tissue lysate, PC-12 cell lysate, rat liver tissue lysate, rat kidney tissue lysate, HeLa, NIH/3T3, human uterus tissue, mouse skeletal muscle tissue, mouse heart tissue.

Subcellular location: Cytoplasm, nucleus, endoplasmic reticulum

Database links: SwissProt: P55072 Human | Q01853 Mouse | P46462 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:250
IHC-P	1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

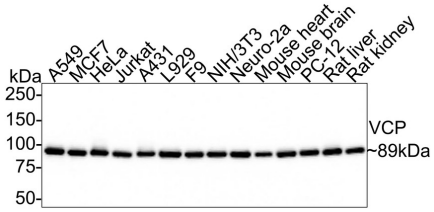

Fig1: Western blot analysis of VCP on different lysates with Rabbit anti-VCP antibody (ER30603) at 1/2,000 dilution.

Lane 1: A549 cell lysate (10 µg/Lane)
Lane 2: MCF7 cell lysate (10 µg/Lane)
Lane 3: HeLa cell lysate (10 µg/Lane)
Lane 4: Jurkat cell lysate (10 µg/Lane)
Lane 5: A431 cell lysate (10 µg/Lane)
Lane 6: L929 cell lysate (10 µg/Lane)
Lane 7: F9 cell lysate (10 µg/Lane)
Lane 8: NIH/3T3 cell lysate (10 µg/Lane)
Lane 9: Neuro-2a cell lysate (10 µg/Lane)
Lane 10: Mouse heart tissue lysate (20 µg/Lane)
Lane 11: Mouse brain tissue lysate (20 µg/Lane)
Lane 12: PC-12 cell lysate (10 µg/Lane)
Lane 13: Rat liver tissue lysate (20 µg/Lane)
Lane 14: Rat kidney tissue lysate (20 µg/Lane)

Predicted band size: 89 kDa
Observed band size: 89 kDa

Exposure time: 5 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER30603) at 1/2,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

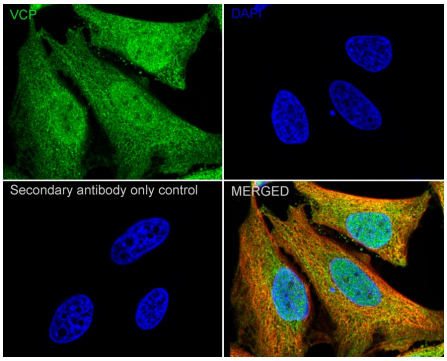

Fig2: Immunocytochemistry analysis of HeLa cells labeling VCP with Rabbit anti-VCP antibody (ER30603) at 1/250 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-VCP antibody (ER30603) at 1/250 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

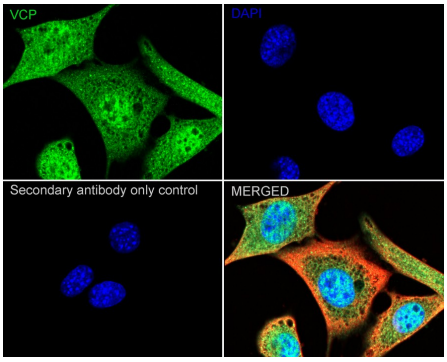

Fig3: Immunocytochemistry analysis of NIH/3T3 cells labeling VCP with Rabbit anti-VCP antibody (ER30603) at 1/250 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-VCP antibody (ER30603) at 1/250 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

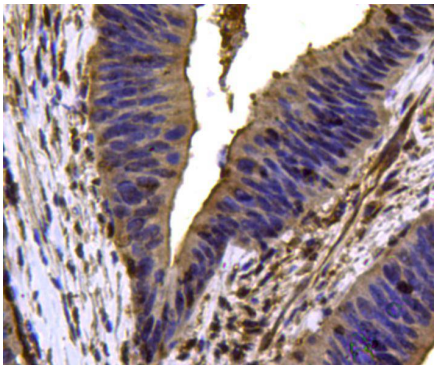

Fig4: Immunohistochemical analysis of paraffin-embedded human uterus tissue using anti-VCP antibody. Counter stained with hematoxylin.

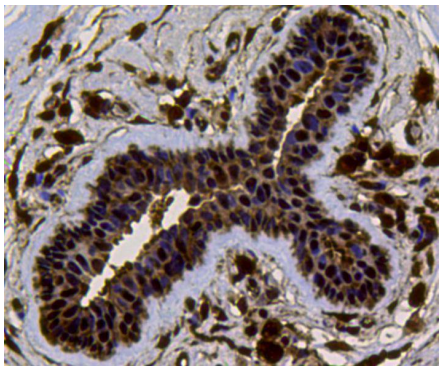

Fig5: Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue using anti-VCP antibody. Counter stained with hematoxylin.

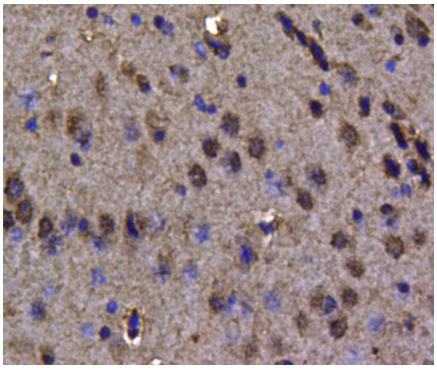

Fig6: Immunohistochemical analysis of paraffin-embedded mouse heart tissue using anti-VCP antibody. Counter stained with hematoxylin.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. "Inclusion body myopathy-associated mutations in p97/VCP impair endoplasmic reticulum-associated degradation." Weihl C.C., Dalal S., Pestronk A., Hanson P.I. Hum. Mol. Genet. 15:189-199(2006).
2. Sanyal S et al. A Viral Deubiquitylating Enzyme Restores Dislocation of Substrates from the Endoplasmic Reticulum (ER) in Semi-intact Cells. J Biol Chem 287:23594-603 (2012).