

## Product datasheet

# Anti-VCP antibody ab36047

★☆☆☆☆ 1 Abreviews 3 References 3 Images

### Overview

<b>Product name</b>	Anti-VCP antibody
<b>Description</b>	Rabbit polyclonal to VCP
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Cow, Pig 
<b>Immunogen</b>	Synthetic peptide conjugated to KLH derived from within residues 1 - 100 of Human VCP. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab36482</a> .)
<b>Positive control</b>	Ab36047 gave a positive result in the following whole cell lysates: HL60, Ramos, MDA MB 361 (data not shown), SW480 (data not shown), Y79 (data not shown), THP1 (data not shown), and MOLT4 (data not shown). Ab36047 gave a positive signal in the following tissue lysates: Rat Kidney; Rat Lung; Rat Liver; Mouse Kidney; Mouse Lung; Mouse Liver.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituent: PBS</p> <p>Batches of this product that have a concentration &lt; 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.</p>

<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab36047 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>WB</b>		Use a concentration of 1 µg/ml. Detects a band of approximately 97 kDa (predicted molecular weight: 89 kDa).
<b>IHC-P</b>		Use a concentration of 1 µg/ml.

## Target

**Function** Necessary for the fragmentation of Golgi stacks during mitosis and for their reassembly after mitosis. Involved in the formation of the transitional endoplasmic reticulum (tER). The transfer of membranes from the endoplasmic reticulum to the Golgi apparatus occurs via 50-70 nm transition vesicles which derive from part-rough, part-smooth transitional elements of the endoplasmic reticulum (tER). Vesicle budding from the tER is an ATP-dependent process. The ternary complex containing UFD1L, VCP and NPLOC4 binds ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytoplasm, where they are degraded by the proteasome. The NPLOC4-UFD1L-VCP complex regulates spindle disassembly at the end of mitosis and is necessary for the formation of a closed nuclear envelope (By similarity). Regulates E3 ubiquitin-protein ligase activity of RNF19A.

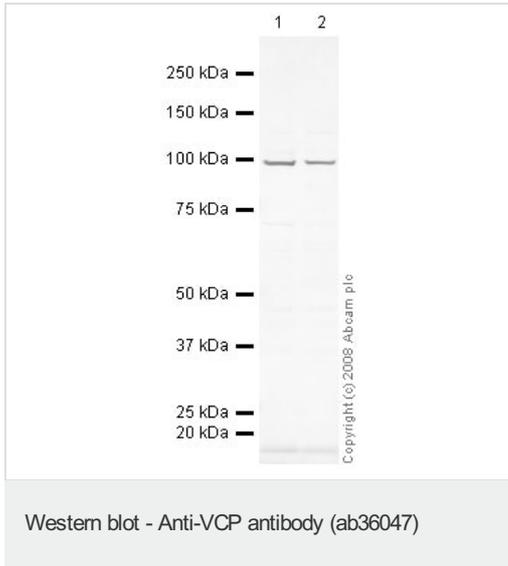
**Involvement in disease** Defects in VCP are the cause of inclusion body myopathy with early-onset Paget disease and frontotemporal dementia (IBMPFD) [MIM:167320]; also known as muscular dystrophy, limb-girdle, with Paget disease of bone or pagetoid amyotrophic lateral sclerosis or pagetoid neuroskeletal syndrome or lower motor neuron degeneration with Paget-like bone disease. IBMPFD features adult-onset proximal and distal muscle weakness (clinically resembling limb girdle muscular dystrophy), early-onset Paget disease of bone in most cases and premature frontotemporal dementia.

**Sequence similarities** Belongs to the AAA ATPase family.

**Post-translational modifications** Phosphorylated by tyrosine kinases in response to T-cell antigen receptor activation (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR. ISGylated.

**Cellular localization** Cytoplasm > cytosol. Nucleus. Present in the neuronal hyaline inclusion bodies specifically found in motor neurons from amyotrophic lateral sclerosis patients. Present in the Lewy bodies specifically found in neurons from Parkinson disease patients.

## Images



**All lanes :** Anti-VCP antibody (ab36047) at 1 µg/ml

**Lane 1 :** HL60 (Human promyelocytic leukemia cell line) Whole Cell Lysate

**Lane 2 :** Ramos (Human Burkitt's lymphoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

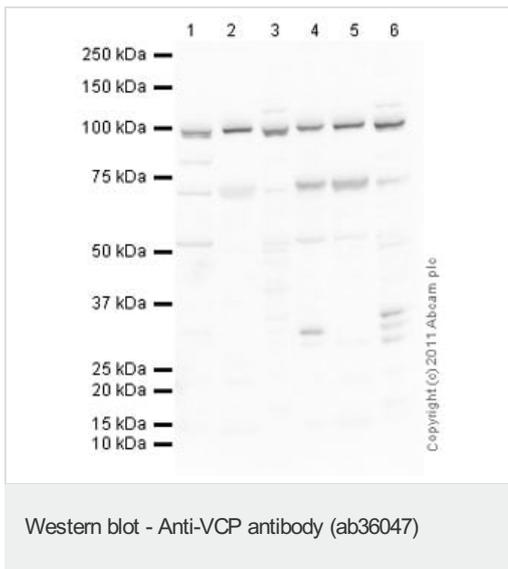
**Secondary**

**All lanes :** IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 89 kDa

**Observed band size:** 97 kDa



**All lanes :** Anti-VCP antibody (ab36047) at 1 µg/ml

**Lane 1 :** Kidney (Mouse) Tissue Lysate

**Lane 2 :** Mouse lung normal tissue lysate - total protein ([ab29297](#))

**Lane 3 :** Liver (Mouse) Tissue Lysate

**Lane 4 :** Kidney (Rat) Tissue Lysate

**Lane 5 :** Lung (Rat) Tissue Lysate

**Lane 6 :** Liver (Rat) Tissue Lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Developed using the ECL technique.

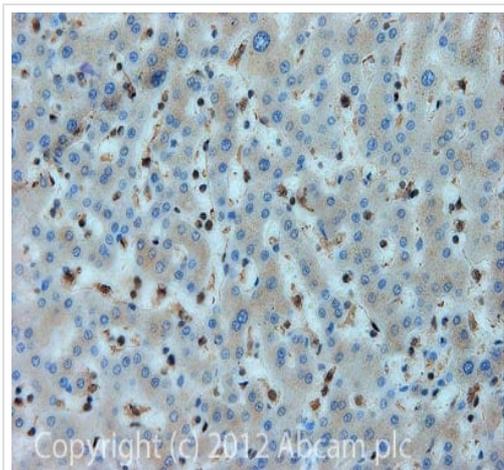
Performed under reducing conditions.

**Predicted band size:** 89 kDa

**Observed band size:** 100 kDa

**Additional bands at:** 52 kDa, 70 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 10 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VCP antibody (ab36047)

IHC image of ab36047 staining in Human normal liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab36047, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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