

Mouse Anti-VCP antibody

SLM-51611M

Product Name VCP

Chinese Name 含缬酪肽蛋白单克隆抗体

Alias valosin-containing protein; 15S Mg(2+) ATPase p97 subunit; ATPase p97; IBMPFD; MGC1319; MGC148092; MGC8560; p97; TER ATPase; TERA; transitional endoplasmic reticulum ATPase; valosin-containing protein; yeast Cdc48p homolog; Transitional endoplasmic reticulum ATPase; ATPase; 15S Mg(2+)-ATPase p97 subunit; p97; TERA_HUMAN.

Research Area Tumour Neurobiology Signal transduction Growth factors and hormones Diabetes glycoprotein

Immunogen Species Mouse

Clonality Monoclonal

Clone NO. N5A9

React Species Human,Mouse,Rat

Applications WB=1:1000-5000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:50-200,IF=1:100-500,Flow-Cytometry
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 97kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen Recombinant human VCP.

Lsotype IgG1, κ

Purification affinity purified by Protein G

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic.

PubMed

applications.

[PubMed](#)

The protein encoded by this gene is a member of a family that includes putative ATP-binding proteins involved in vesicle transport and fusion, 26S proteasome function, and assembly of peroxisomes. As a structural protein, is associated with clathrin, and heat-shock protein Hsc70, to form a complex that has been implicated in a number of cellular events that are regulated during mitosis, including homotypic membrane fusion, spindle pole body function, and ubiquitin-dependent protein degradation. [proteomics RefSeq, Jul 2008]

Function:

Necessary for the fragmentation of Golgi stacks during mitosis and for their reassembly after mitosis 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 tER is an ATP-dependent process. The ternary complex containing UFD1L, VCP and NPLOC4 binds to ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytosol 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 (see also similarity). Regulates E3 ubiquitin-protein ligase activity of RNF19A.

**Product
Detail**

Subcellular Location:

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

Post-translational modifications:

Phosphorylated by tyrosine kinases in response to T-cell antigen receptor activation. Phosphorylated upon DNA damage, probably by ATM or ATR. ISGylated.

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 Pagetoid 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, and cases and premature frontotemporal dementia.

Similarity:

Belongs to the AAA ATPase family.

SWISS:

P55072

Gene ID:
7415

Database links:

[Entrez Gene: 7415](#) Human

[Entrez Gene: 269523](#) Mouse

[Entrez Gene: 116643](#) Rat

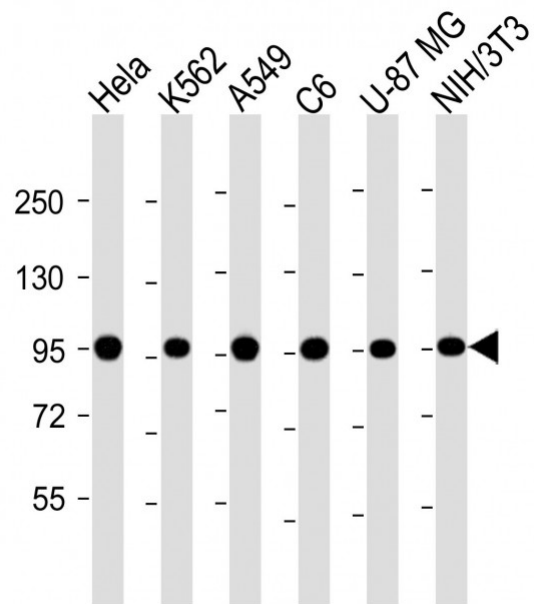
[Omim: 601023](#) Human

[SwissProt: P55072](#) Human

[SwissProt: Q01853](#) Mouse

[SwissProt: P46462](#) Rat

**Product
Picture**



Sample:

Lane 1: HeLa cell lysates

Lane 2: K562 cell lysates

Lane 3: A549 cell lysates

Lane 4: C6 cell lysates

Lane 5: U-87 MG cell lysates

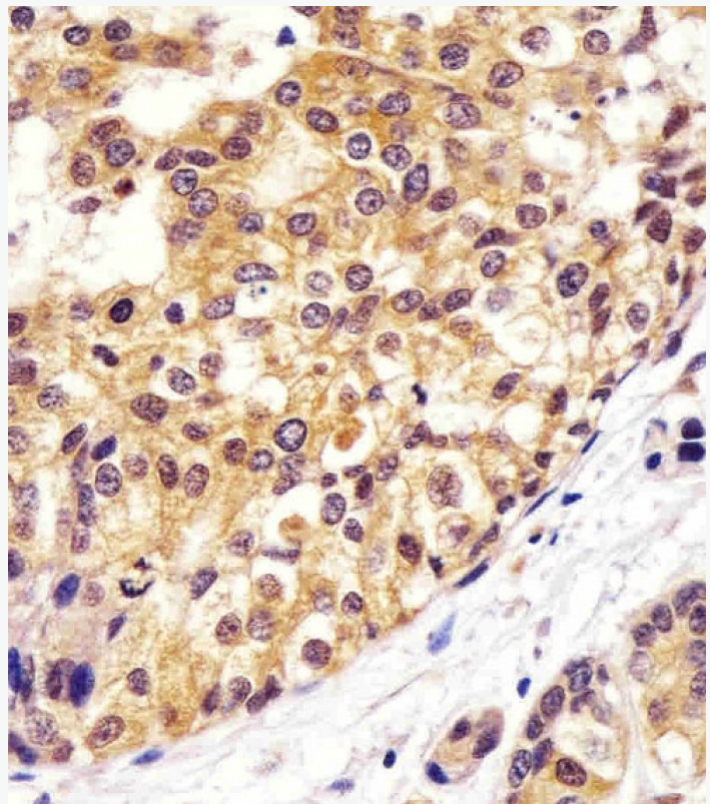
Lane 6: NIH/3T3 cell lysates

Primary: Anti-VCP (SLM-51611M) at 1/4000 dilution

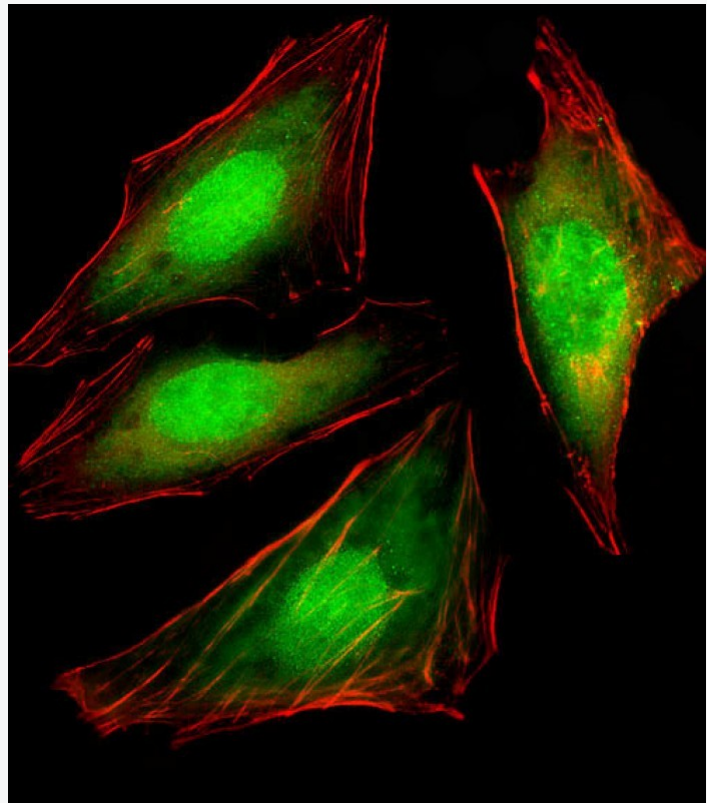
Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 97 kD

Observed band size: 97 kD

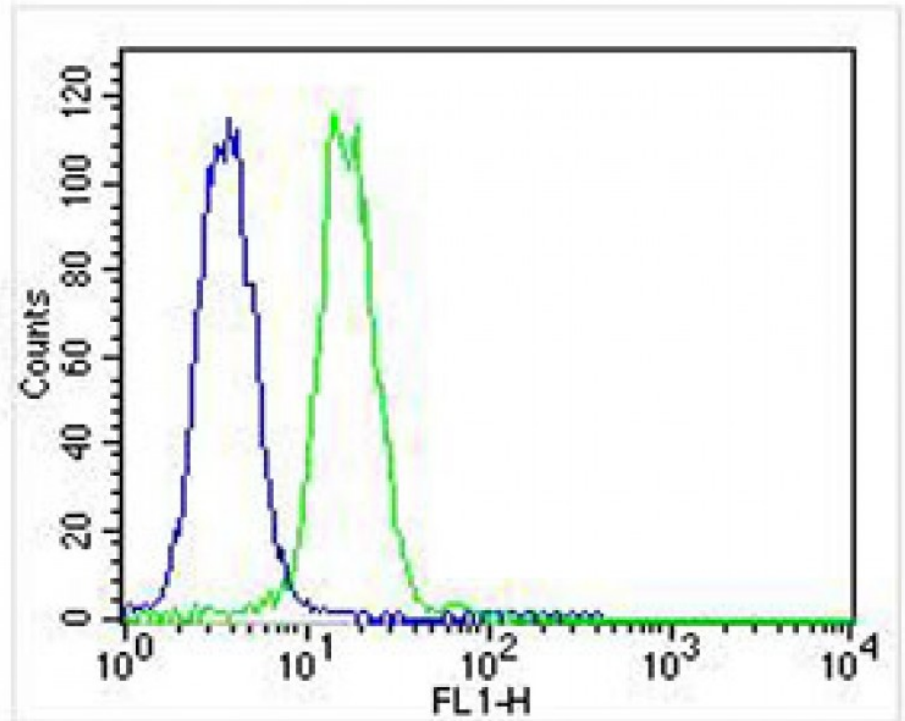


Paraformaldehyde-fixed, paraffin embedded (human breast carcinoma sections); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (VCP) Monoclonal Antibody, Unconjugated (SLM-51611M) at 1:200 overnight at 4°C, followed by DAB staining, operating according to SP Kit(Mouse)(sp-0024) instructions and DAB staining.



HeLa cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Antibody incubation with (VCP) monoclonal Antibody Unconjugated (SLM-51611M) 1:25, 90 minutes at 37°C; followed by a conjugated Goat Anti-mouse antibody at 37°C for 90 minutes, Dylight® 554 Phalloidin (red) was used to stain the cell Cytoskeleton.

actin.



Blank control:K562.

Primary Antibody (green line): Mouse Anti-VCP antibody (SLM-51611M)

Dilution: 1:25;

Isotype Control Antibody (blue line): Mouse IgG Secondary Antibody : Goat anti-mouse IgG

Dilution: 1:400 Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% methanol for 20 min at -20°C.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody



min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.