

VCP Monoclonal Antibody (5)

Product Details	
Size	100 µg
Species Reactivity	Human, Mouse, Rat
Published Species	Yeast, Mouse, Human
Host/Isotype	Mouse / IgG2a
Class	Monoclonal
Type	Antibody
Clone	5
Conjugate	Unconjugated
Immunogen	Synthetic peptide corresponding to residues C G(792) G S V Y T E D N D D D L Y G(806) of mouse VCP.
Form	Liquid
Concentration	1.0 mg/mL
Purification	Protein G
Storage buffer	PBS, pH 7.4, with 1mg/mL BSA
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2214638

Applications	Tested Dilution	Publications
Western Blot (WB)	1:1,000	16 Publications
Immunohistochemistry (IHC)	-	7 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:500	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	1:500	-
Immunocytochemistry (ICC/IF)	1:20-1:200	5 Publications
Flow Cytometry (Flow)	1/400	-
Immunoprecipitation (IP)	Assay-dependent	2 Publications

Product Specific Information

MA3-004 detects VCP protein in human, mouse, and rat samples.

MA3-004 has successfully been used in Western blot immunoprecipitation, and immunohistochemical procedures. By Western blot, this antibody detects an ~97 kDa protein representing VCP from total lysate of cultured human B cells.

The MA3-004 immunogen is a synthetic peptide corresponding to residues C G(792) G S V Y T E D N D D D L Y G(806) of mouse VCP. This peptide (Cat. # PEP-239) is available for use in neutralization and control experiments.

Advanced Verification Data

A VCP Antibody (MA3-004)

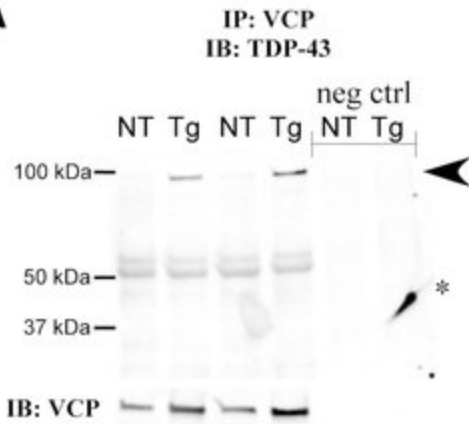
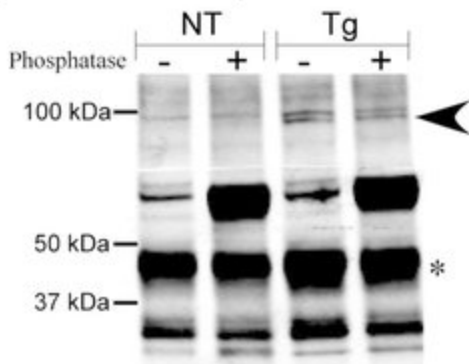
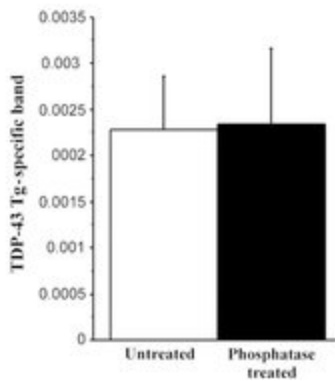


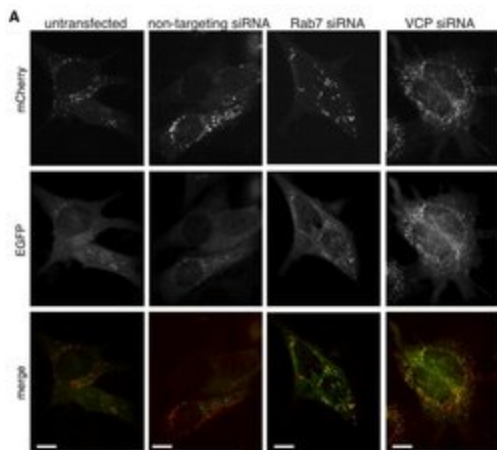
Figure 7 High-molecular-weight TDP-43 interacts with VCP. A : Immunoprecipitation (IP) with a VCP antibody and immunoblot (IB) for TDP-43 uncovered an interaction between VCP and the Tg-specific TDP-43 high-molecular-weight isoform (arrowhead). B : High-molecular-weight TDP-43 is not affected by alkaline phosphatase treatment (arrowhead). C : Quantification of B (n = 4 per group). Asterisks indicate full-length TDP-43 bands. Data are given as means +- SEM. Cell treatment validation info.

B Alkaline Phosphatase treatment



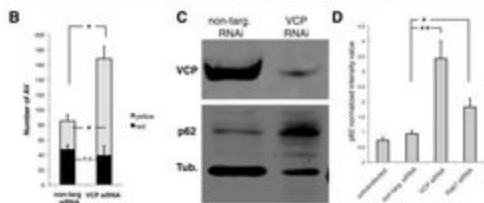
C





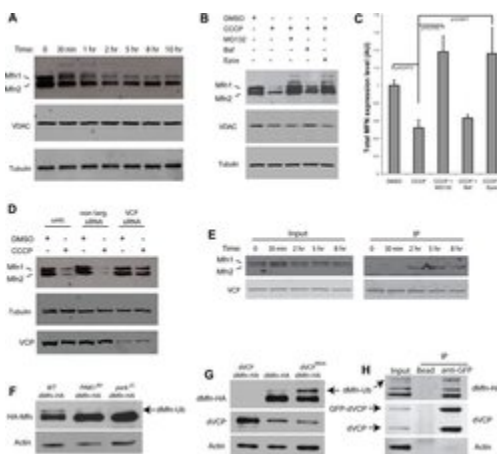
VCP Antibody (MA3-004)

RNAi knock down of VCP impairs autophagosome maturation (A) mCherry-EGFP-LC3b stable MEFs transfected with non-targeting, Rab7 or VCP siRNA. Scale bars equal 10 μm. (B) Quantification of autophagosomes and autophagolysosomes under basal conditions in cells transfected with non-targeting or VCP-targeting siRNA. * indicates $p < 0.01$; n.s. indicates non-significant difference, error bars indicate standard errors. (C). Immunoblot against VCP, p62 and tubulin in non-targeting and VCP-targeting siRNA in MEFs. p62 and tubulin were observed simultaneously using a Li-Cor Odyssey system. (D) Quantification of p62 normalized against tubulin in cells transfected with non-targeting, VCP-targeting or Rab7-targeting siRNA. * indicates $p < 0.01$; ** $p < 0.001$; error bars indicate standard deviation from triplicates. Knockdown validation info.



VCP Antibody (MA3-004)

Mitofusin degradation by the proteasome is dependent on VCP A. Western blots in YFP-Parkin stable HeLa cells against MFN1 and 2, VDAC and tubulin at different time points after CCCP treatment. Ubiquitinated forms of MFNs 1/2 can be observed migrating more slowly. B. Western blots in YFP-Parkin stable HeLa cells against MFN1/2, VDAC, and tubulin. Cells were treated for 12 h with CCCP and either proteasome inhibitors (MG132 or epoxomicin) or the autophagy inhibitor bafilomycin. Ubiquitinated forms of MFN1/2 can be again observed migrating more slowly, particularly with proteasome inhibition. C. Quantification of total MFN expression levels normalized against tubulin in YFP-Parkin stable HeLa cells treated for 12 h with CCCP and either proteasome inhibitors (MG132 or epoxomicin), or the autophagy inhibitor bafilomycin. Error bars indicate standard deviation from triplicates. D. Knockdown of VCP stabilizes MFNs 1 and 2. Western blots in YFP-Parkin stable HeLa cells against MFN1/2, VCP and tubulin. Cells were transfected with non-targeting or VCP-targeting siRNA and treated for 12 h with DMSO or CCCP. E. FLAG IP in HeLa cells cotransfected with YFP-Parkin and VCP-FLAG and treated with CCCP for the indicated times. Immunoprecipitation samples were immunoblotted against MFN1/2 and VCP. Following mitochondrial depolarization VCP interacts with MFN2. F. Total dMfn-HA accumulates in PINK1B9 (lane 2) and Park25 (lane 3) null mutants. Notably, ubiquitinated dMfn is decreased in PINK1B9 n Knockdown validation info.



View more figures on thermofisher.com

Western Blot (16)

International journal of molecular sciences

Parkin Coordinates Platelet Stress Response in Diabetes Mellitus: A Big Role in a Small Cell.

"MA3-004 was used in Western Blotting to investigate the expression of parkin within healthy and diabetic platelets, hearts, muscles and brains to find the significance of parkin in diabetes meticullus and its possible therapeutic use."

Authors: Lee SH,Du J,Hwa J,Kim WH

Species
Mouse

Dilution
1:1000

Year
2020

Cell chemical biology

Site-Specific Photo-Crosslinking Proteomics Reveal Regulation of IFITM3 Trafficking and Turnover by VCP/p97 ATPase.

"MA3-004 was used in Western Blotting to reveal the interaction of IFITM3 with VCP and uncovered key functional roles of the interaction on modulating IFITM3 trafficking."

Authors: Wu X,Spence JS,Das T,Yuan X,Chen C,Zhang Y,Li Y,Sun Y,Chandran K,Hang HC,Peng T

Species
Human

Dilution
Not Cited

Year
2020

[View more WB references on thermofisher.com](#)

Immunohistochemistry (7)

Neurology. Genetics

PFKM gene defect and glycogen storage disease GSDVII with misleading enzyme histochemistry.

"Published figure using VCP monoclonal antibody (Product # MA3-004) in Immunohistochemistry"

Authors: Auranen M,Palmio J,Ylikallio E,Huovinen S,Paetau A,Sandell S,Haapasalo H,Viitaniemi K,Piirilä P,Tyynismaa H,Udd B

Species
Human

Dilution
Not Cited

Year
2015

Neuropathology : official journal of the Japanese Society of Neuropathology

Ubiquitin-negative, eosinophilic neuronal cytoplasmic inclusions associated with stress granules and autophagy: an immunohistochemical investigation of two cases.

"MA3-004 was used in immunohistochemistry to investigate the association of eosinophilic neuronal cytoplasmic inclusions with stress granules and autophagy in two clinical cases"

Authors: Mori F,Watanabe Y,Miki Y,Tanji K,Odagiri S,Eto K,Wakabayashi K

Species
Human

Dilution
1:5000

Year
2014

[View more IHC references on thermofisher.com](#)

More applications with references on thermofisher.com

IHC (P) (1)

ICC/IF (5)

IP (2)

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.