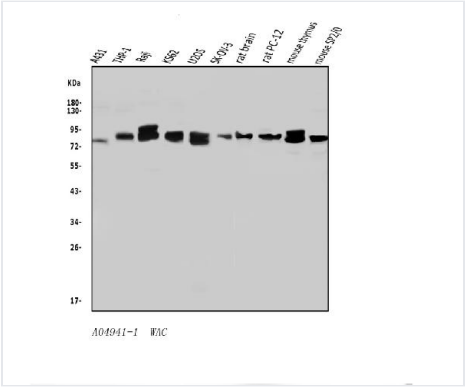
WAC Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

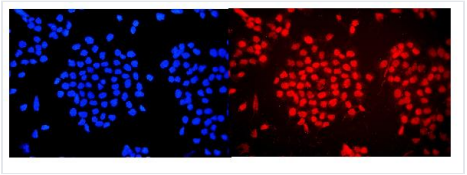
Product Name	WAC, Polyclonal Antibody
Full Product Name	Anti-WAC Antibody
Product Gene Name	anti-WAC antibody
Product Synonym Names	WW domain-containing adapter protein with coiled-coil; WAC; KIAA1844; WW domain containing adaptor with coiled-coil
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Purity/Purification	Immunogen affinity purified.
Specificity	Rabbit IgG polyclonal antibody for WAC detection.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
Molecular Weight	Predicted: 71 kDa Observed: 75 kDa
OMIM	615049
3D Structure	ModBase 3D Structure for Q9BTA9
Immunogen	E Coli-derived human WAC recombinant protein (Position: Q459-V647).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems||Lab recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (MBS176460) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (MBS176453) for ICC.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-WAC antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS/FCM), Direct ELISA (EIA)
Application Notes for anti-WAC antibody	WB: 0.1-0.25ug/ml|Human, Mouse, Rat| ICC/IF: 4ug/ml|Human| FC/FACS/FCM: 1-3ug/1x106 cells|Human| Direct ELISA: 0.1-0.5ug/ml|Human|
Related Product Information for anti-WAC antibody	The protein encoded by this gene contains a WW domain, which is a protein module found in a wide range of signaling proteins. This domain mediates protein-protein interactions and binds proteins containing short linear peptide motifs that are proline-rich or contain at least one proline. This gene product shares 94% sequence identity with the WAC protein in mouse, however, its exact function is not known. Alternative splicing results in multiple transcript variants.

Product References and Citations for anti-WAC antibody	1. DeSanto, C., D'Aco, K., Araujo, G. C., Shannon, N., DDD Study, Vernon, H., Rahrig, A., Monaghan, K. G., Niu, Z., Vitazka, P., Dodd, J., Tang, S., and 9 others. WAC loss-of-function mutations cause a recognisable syndrome characterised by dysmorphic features, developmental delay and hypotonia and recapitulate 10p11. 23 microdeletion syndrome. J. Med. Genet. 52: 754-761, 2015. 2. Nagase, T., Nakayama, M., Nakajima, D., Kikuno, R., Ohara, O. Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. DNA Res. 8: 85-95, 2001. 3. Xu, G. M., Arnaout, M. A. WAC, a novel WW domain-containing adapter with a coiled-coil region, is colocalized with splicing factor SC35. Genomics 79: 87-94, 2002.
Other Notes	Small volumes of anti-WAC antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for WAC purchase	MBS1753680 is an antibody targeting WAC. Reactive in Human, Mouse, Rat. Host: Rabbit.



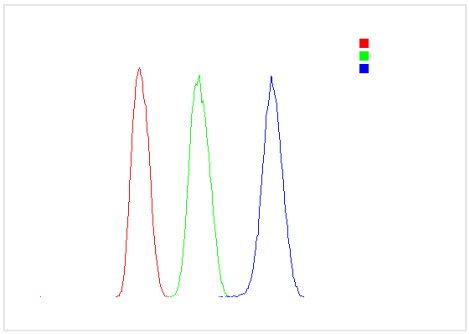
Western Blot (WB) of anti-WAC antibody

Figure 1. Western blot analysis of WAC using anti-WAC antibody (MBS1753680).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human A431 whole cell lysatesLane 2: human THP-1 whole cell lysatesLane 3: human Raji whole cell lysatesLane 4: human K562 whole cell lysatesLane 5: human U20S whole cell lysatesLane 6: human SK-OV-3 whole cell lysatesLane 7: rat brain tissue lysatesLane 8: rat PC-12 whole cell lysatesLane 9: mouse thymus tissue lysatesLane 10: mouse SP2/0 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-WAC antigen affinity purified polyclonal antibody (Catalog # MBS1753680) at 0. 25 ?g/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # MBS176460) with Tanon 5200 system. A specific band was detected for WAC at approximately 85KD. The expected band size for WAC is at 85KD.



Immunofluorescence (IF) of anti-WAC antibody

Figure 2. IF analysis of WAC using anti-WAC antibody (MBS1753680).WAC was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 4?g/mL rabbit anti-WAC Antibody (MBS1753680) overnight at 4 degree C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-WAC antibody
Figure 3. Flow Cytometry analysis of HepG2 cells using anti-WAC antibody (MBS1753680).Overlay histogram showing HepG2 cells stained with MBS1753680 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-WAC Antibody (MBS1753680,1?g/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10?g/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1?g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for WAC. It may not necessarily be applicable to this product.

NCBI GI #	18379328
NCBI GeneID	51322
NCBI Accession #	NP_057712
UniProt Primary Accession #	Q9BTA9
UniProt Secondary Accession #	Q53EN9; Q5JU75; Q5JU77; Q5VXK0; Q5VXK2; Q8TCK1; A8K2A9; C9JBT9; D3DRW5; D3DRW6; D3DRW7
UniProt Related Accession #	Q9BTA9
GenBank Nucleotide #	NM_016628.4
NCBI Official Full Name	WW domain-containing adapter protein with coiled-coil isoform 1
NCBI Official Synonym Full Names	WW domain containing adaptor with coiled-coil
NCBI Official Symbol	WAC
NCBI Official Synonym Symbols	Wwp4; BM-016; PRO1741
UniProt Protein Name	WW domain-containing adapter protein with coiled-coil
Protein Family	Fibritin
UniProt Gene Name	WAC
UniProt Synonym Gene Names	KIAA1844
UniProt Entry Name	WAC_HUMAN
NCBI Protein Information	WW domain-containing adapter protein with coiled-coil

UniProt Comments for WAC	WAC: Acts as a linker between gene transcription and histone H2B monoubiquitination at 'Lys-120' (H2BK120ub1). Interacts with the RNA polymerase II transcriptional machinery via its WW domain and with RNF20-RNF40 via its coiled coil region, thereby linking and regulating H2BK120ub1 and gene transcription. Regulates the cell-cycle checkpoint activation in response to DNA damage. Positive regulator of amino acid starvation-induced autophagy. May negatively regulate the ubiquitin proteasome pathway. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Adaptor/scaffold Chromosomal Location of Human Ortholog: 10p12.1|10p12.1-p11.2 Cellular Component: nucleoplasm; spliceosome; nuclear speck; nucleus Molecular Function: protein binding; chromatin binding Biological Process: histone monoubiquitination; transcription, DNA-dependent; positive regulation of transcription, DNA-dependent; negative regulation of proteasomal ubiquitin-dependent protein catabolic process; response to DNA damage stimulus; positive regulation of macroautophagy
Research Articles on WAC	**1.** The identification of SCOC and WAC as novel regulatory proteins with diverse functions in autophagy contributes towards a fuller understanding of autophagosome formation.
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