

**WAC Antibody**  
**Catalog # ASC11640****Specification**

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**WAC Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q9BTA9</a>
Other Accession	<a href="#">NP_057712</a> , <a href="#">18379328</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 71 kDa
Application Notes	Observed: 75 kDa KDa WAC Antibody can be used for detection of WAC by Western blot at 1 µg/mL.

**WAC Antibody - Additional Information**

Gene ID 51322

**Target/Specificity**

WAC; At least two isoforms of WAC are known to exist; this antibody will detect the larger isoform.

**Reconstitution & Storage**

WAC antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

WAC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**WAC Antibody - Protein Information****Name** WAC**Synonyms** KIAA1844**Function**

Acts as a linker between gene transcription and histone H2B monoubiquitination at 'Lys-120' (H2BK120ub1) (PubMed:<a href="http://www.uniprot.org/citations/21329877" target="\_blank">21329877</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/21329877" target="\_blank">21329877</a>). Regulates the cell-cycle checkpoint activation in response to DNA damage (PubMed:<a href="http://www.uniprot.org/citations/21329877" target="\_blank">21329877</a>). Positive regulator of amino acid starvation-induced autophagy (PubMed:<a href="http://www.uniprot.org/citations/22354037" target="\_blank">22354037</a>). Also acts as a negative regulator of basal autophagy (PubMed:<a href="http://www.uniprot.org/citations/22354037" target="\_blank">22354037</a>).

href="http://www.uniprot.org/citations/26812014" target="\_blank">26812014</a>). Positively regulates MTOR activity by promoting, in an energy-dependent manner, the assembly of the TTT complex composed of TEO2, TTI1 and TTI2 and the RUVBL complex composed of RUVBL1 and RUVBL2 into the TTT-RUVBL complex. This leads to the dimerization of the mTORC1 complex and its subsequent activation (PubMed:<a href="http://www.uniprot.org/citations/26812014" target="\_blank">26812014</a>). May negatively regulate the ubiquitin proteasome pathway (PubMed:<a href="http://www.uniprot.org/citations/21329877" target="\_blank">21329877</a>).

#### Cellular Location

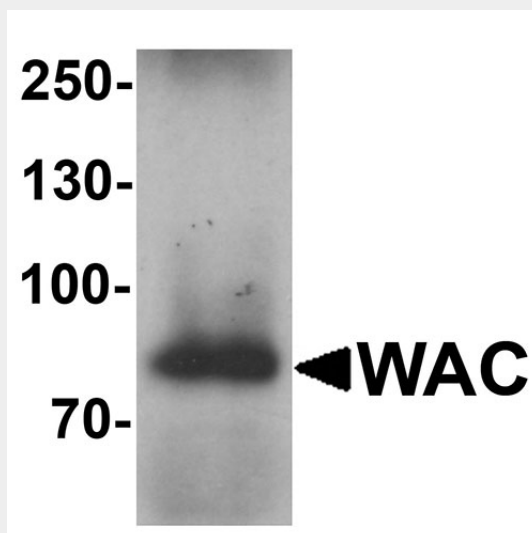
Nucleus speckle {ECO:0000250|UniProtKB:Q924H7}. Nucleus. Note=In distinct nuclear speckles. Colocalizes with pre-mRNA processing complexes {ECO:0000250|UniProtKB:Q924H7}

#### WAC Antibody - Protocols

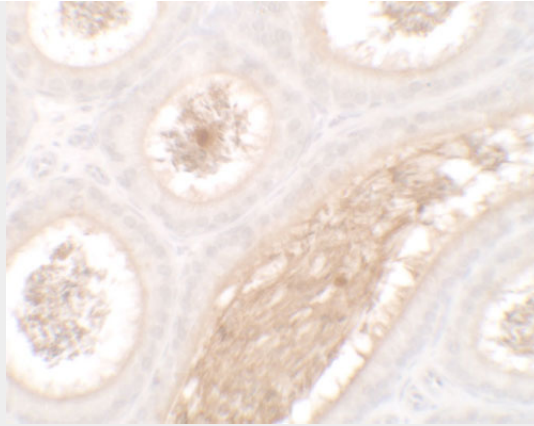
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

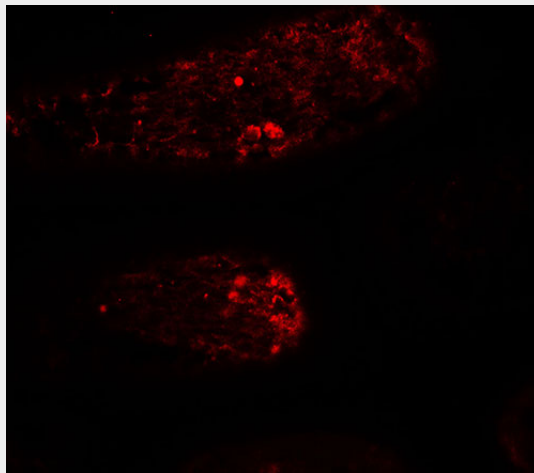
#### WAC Antibody - Images



Western blot analysis of WAC in human testis tissue lysate with WAC antibody at 1 µg/mL.



Immunohistochemistry of WAC in mouse testis tissue with WAC antibody at 2.5 µg/ml.



Immunofluorescence of WAC in mouse testis tissue with WAC antibody at 5 µg/ml.

### **WAC Antibody - Background**

**WAC Antibody:** The WW domain containing adaptor with coiled-coil protein (WAC) contains a WW domain that mediates protein-protein interactions and colocalizes with RNA splicing factor SC35. Further studies have indicated that WAC is a functional partner of the RNF20/40 complex that ubiquitinates Histone H2B, and that WAC regulates H2B ubiquitination. WAC targets RNF20/40 to associate with RNA polymerase II complex for H2B ubiquitination at active transcription sites. WAC-dependent transcription is also important for cell-cycle checkpoint activation in response to genotoxic stress.

### **WAC Antibody - References**

Xu GM and Arnaout MA. WAC, a novel WW domain-containing adapter with a coiled-coil region, is colocalized with splicing factor SC35. *Genomics* 2002; 79:87-94.  
Zhang F and Yu X. WAC, a functional partner of RNF20/40, regulates histone H2B ubiquitination and gene transcription. *Mol. Cell* 2011; 41:384-97.