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WAC Antibody

Catalog # ASC11640

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9BTA9
Other Accession	NP_057712, 18379328
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	70724
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	WAC Antibody can be used for detection of WAC by Western blot at 1 □g/mL.

Additional Information

Gene ID	51322
Other Names	WW domain-containing adapter protein with coiled-coil, WAC, KIAA1844
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℃ for three months and -20℃, stable for up to one year.
Precautions	WAC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	WAC
Synonyms	KIAA1844
Function	Acts as a linker between gene transcription and histone H2B monoubiquitination at 'Lys-120' (H2BK120ub1) (PubMed:21329877). 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:21329877). Regulates the cell-cycle checkpoint activation in response to DNA damage (PubMed:21329877). Positive regulator of amino acid starvation-induced autophagy (PubMed:22354037). Also acts as a negative regulator of basal autophagy (PubMed:26812014). Positively regulates MTOR activity by promoting, in an energy-dependent manner, the assembly of the TTT complex composed of TELO2, 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:26812014). May negatively regulate the ubiquitin proteasome pathway (PubMed:21329877).
Cellular Location	Nucleus speckle {ECO:0000250|UniProtKB:Q924H7}. Nucleus. Note=In distinct nuclear speckles. Colocalizes with pre-mRNA processing complexes {ECO:0000250|UniProtKB:Q924H7}

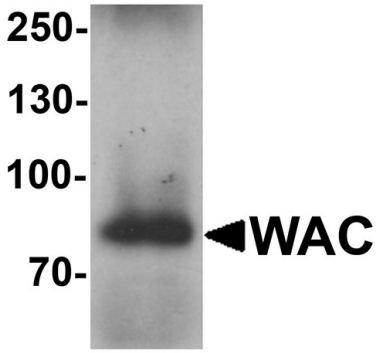
Background

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.

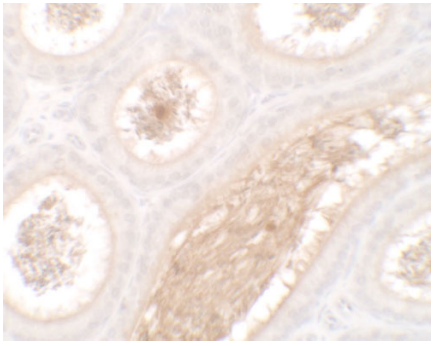
References

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.

Images

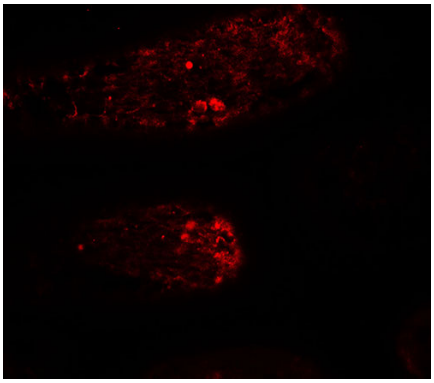


Western blot analysis of WAC in human testis tissue lysate with WAC antibody at 1 µg/mL.



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.



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