

WTAP Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	55	Rabbit	#Q15007	9589

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

WTAP Antibody recognizes endogenous levels of total WTAP protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human WTAP protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Methyltransferase-like protein 3 (METTL3) and methyltransferase-like protein 14 (METTL14) are the two catalytic subunits of an N6-methyltransferase complex that methylates adenosine residues in RNA (1). Methylation of adenosine residues regulates mRNA splicing, processing, translation efficiency, editing and stability, in addition to regulating primary miRNA processing, and is critical for proper regulation of the circadian clock, embryonic stem cell self-renewal, immune tolerance, response to various stimuli, meiosis and mouse fertility (2,3). In this complex, METTL3 functions as the catalytic methyltransferase subunit and METTL14 functions as the target recognition subunit by binding to RNA (4). In addition, the Wilms' tumor 1-associating protein (WTAP) functions as a regulatory subunit and is required for accumulation of the complex to nuclear speckles, which are sites of RNA processing (5). Several studies suggest a role for this complex in cancer. METTL3 expression is elevated in lung adenocarcinoma where it promotes growth, survival, and invasion of human lung cancer cells (6). In addition, WTAP is overexpressed in a number of different cancers and positively regulates cell migration and invasion in glioblastoma and cholangiocarcinoma (7,8).

Background References

1. Liu, J. et al. (2014) *Nat Chem Biol* 10, 93-5.
2. Yue, Y. et al. (2015) *Genes Dev* 29, 1343-55.
3. Wu, R. et al. (2016) *Mol Biotechnol* 58, 450-9.
4. Wang, X. et al. (2016) *Nature* 534, 575-8.
5. Ping, X.L. et al. (2014) *Cell Res* 24, 177-89.
6. Lin, S. et al. (2016) *Mol Cell* 62, 335-45.
7. Jin, D.I. et al. (2012) *Cancer Sci* 103, 2102-9.
8. Jo, H.J. et al. (2013) *J Gastroenterol* 48, 1271-82.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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