

## WDR4 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP17552c

### **Specification**

# WDR4 Antibody (Center) - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Isotype Calculated MW Antigen Region WB,E <u>P57081</u> <u>O9EP82</u>, <u>A7E3S5</u>, <u>NP\_061139.2</u> Human Bovine, Mouse Rabbit Polyclonal Rabbit IgG 45490 146-173

## WDR4 Antibody (Center) - Additional Information

Gene ID 10785

Other Names tRNA (guanine-N(7)-)-methyltransferase non-catalytic subunit WDR4 {ECO:0000255|HAMAP-Rule:MF\_03056}, WD repeat-containing protein 4 {ECO:0000255|HAMAP-Rule:MF\_03056}, WDR4 {ECO:0000255|HAMAP-Rule:MF\_03056}

#### Target/Specificity

This WDR4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 146-173 amino acids from the Central region of human WDR4.

Dilution WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

WDR4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## WDR4 Antibody (Center) - Protein Information

Name WDR4



**Function** Non-catalytic component of the METTL1-WDR4 methyltransferase complex required for the formation of N(7)-methylguanine in a subset of RNA species, such as tRNAs, mRNAs and microRNAs (miRNAs) (PubMed:<u>12403464</u>, PubMed:<u>31031083</u>, PubMed:<u>31031084</u>, PubMed:<u>36599982</u>, PubMed:<u>36599985</u>, PubMed:<u>37369656</u>). In the METTL1-WDR4 methyltransferase complex, WDR4 acts as a scaffold for tRNA-binding (PubMed:<u>36599982</u>, PubMed:<u>37369656</u>). Required for the formation of N(7)- methylguanine at position 46 (m7G46) in a large subset of tRNAs that contain the 5'-RAGGU-3' motif within the variable loop (PubMed:<u>12403464</u>, PubMed:<u>34352206</u>, PubMed:<u>34352207</u>, PubMed:<u>36599982</u>, PubMed:<u>37369656</u>). M7G46 interacts with C13-G22 in the D-loop to stabilize tRNA tertiary structure and protect tRNAs from decay (PubMed:<u>36599982</u>, PubMed:<u>36599985</u>). Also required for the formation of N(7)-methylguanine at internal sites in a subset of mRNAs (PubMed:<u>31031084</u>, PubMed:<u>37379838</u>). Also required for methylation of a specific subset of miRNAs, such as let-7 (PubMed:<u>31031083</u>). Independently of METTL1, also plays a role in genome stability: localizes at the DNA replication site and regulates endonucleolytic activities of FEN1 (PubMed:<u>26751069</u>).

**Cellular Location** Nucleus. Chromosome Note=Localizes at the site of nascent DNA synthesis

# WDR4 Antibody (Center) - Protocols

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

- Western Blot
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- <u>Flow Cytomety</u>
- <u>Cell Culture</u>

# WDR4 Antibody (Center) - Images



WDR4 Antibody (Center) (Cat. #AP17552c) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the WDR4 antibody detected the WDR4 protein (arrow).

## WDR4 Antibody (Center) - Background

This gene encodes a member of the WD repeat protein



family. WD repeats are minimally conserved regions of approximately 40 amino acids typically bracketed by gly-his and trp-asp (GH-WD), which may facilitate formation of heterotrimeric or multiprotein complexes. Members of this family are involved in a variety of cellular processes, including cell cycle progression, signal transduction, apoptosis, and gene regulation. This gene is excluded as a candidate for a form of nonsyndromic deafness (DFNB10), but is still a candidate for other disorders mapped to 21q22.3 as well as for the development of Down syndrome phenotypes. Two transcript variants encoding the same protein have been found for this gene.

# WDR4 Antibody (Center) - References

Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007) Olsen, J.V., et al. Cell 127(3):635-648(2006) Hu, Y.H., et al. BMC Genomics 7, 155 (2006) : Cartlidge, R.A., et al. EMBO J. 24(9):1696-1705(2005) Alexandrov, A., et al. RNA 8(10):1253-1266(2002)