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WDR4 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP17552c

Specification

WDR4 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P57081

WDR4 Antibody (Center) Blocking Peptide - 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}

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

WDR4 Antibody (Center) Blocking Peptide - 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:12403464, PubMed:31031084, PubMed:31031083, PubMed:36599982, PubMed:36599985, PubMed:37369656). In the METTL1-WDR4 methyltransferase complex, WDR4 acts as a scaffold for tRNA-binding (PubMed:36599982, PubMed:36599985, PubMed:37369656). 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:12403464, PubMed:34352207,

PubMed:34352206, PubMed:36599982, PubMed:36599985, PubMed:37369656). M7G46 interacts with C13-G22 in the D-loop to stabilize tRNA tertiary structure and protect tRNAs from decay (PubMed:36599982, PubMed:36599985). Also required for the formation of N(7)-methylguanine at internal sites in a subset of mRNAs (PubMed:31031084, PubMed:37379838). Also required for methylation of a specific subset of miRNAs, such as let-7 (PubMed:31031083). Independently of METTL1, also plays a role in genome stability: localizes at the DNA replication site and regulates endonucleolytic activities of FEN1 (PubMed:26751069).

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

WDR4 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

WDR4 Antibody (Center) Blocking Peptide - Images

WDR4 Antibody (Center) Blocking Peptide - Background

This gene encodes a member of the WD repeat proteinfamily. WD repeats are minimally conserved regions of approximately40 amino acids typically bracketed by gly-his and trp-asp (GH-WD),which may facilitate formation of heterotrimeric or multiproteincomplexes. Members of this family are involved in a variety ofcellular processes, including cell cycle progression, signaltransduction, apoptosis, and gene regulation. This gene is excludedas a candidate for a form of nonsyndromic deafness (DFNB10), but isstill a candidate for other disorders mapped to 21q22.3 as well asfor the development of Down syndrome phenotypes. Two transcriptvariants encoding the same protein have been found for this gene.

WDR4 Antibody (Center) Blocking Peptide - 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)