

WTAP (D-7): sc-374280

BACKGROUND

Wilms' tumor (WT) is an embryonal malignancy of the kidney that affects 1 in 10,000 infants and is observed in both sporadic and inherited forms. The Wilms' tumor protein (WT1) binds the DNA sequence GCGGGGGCG, a recognition element common to the early growth response (Egr) family of Zn²⁺ finger transcriptional activators and functions as a transcriptional repressor. WTAP (Wilms tumor 1-associating protein) is a ubiquitously expressed nuclear protein that interacts with WT1 and may be involved in regulating mRNA splicing. WTAP is found in nuclear speckles, where it regulates the G₂/M cell cycle transition by binding to the 3' UTR of cyclin A2, thus enhancing its stability. Additionally, WTAP inhibits expression of WT1 target genes and is able to impair the ability of WT1 to bind DNA. Two isoforms of WTAP exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: WTAP (human) mapping to 6q25.3; Wtap (mouse) mapping to 17 A1.

SOURCE

WTAP (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-399 at the C-terminus of WTAP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

WTAP (D-7) is available conjugated to agarose (sc-374280 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374280 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374280 PE), fluorescein (sc-374280 FITC), Alexa Fluor® 488 (sc-374280 AF488), Alexa Fluor® 546 (sc-374280 AF546), Alexa Fluor® 594 (sc-374280 AF594) or Alexa Fluor® 647 (sc-374280 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374280 AF680) or Alexa Fluor® 790 (sc-374280 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374280 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

WTAP (D-7) is recommended for detection of WTAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

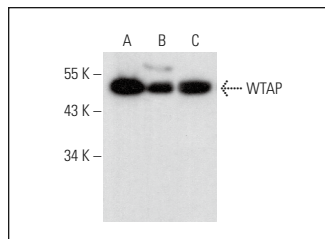
Suitable for use as control antibody for WTAP siRNA (h): sc-63224, WTAP siRNA (m): sc-63225, WTAP shRNA Plasmid (h): sc-63224-SH, WTAP shRNA Plasmid (m): sc-63225-SH, WTAP shRNA (h) Lentiviral Particles: sc-63224-V and WTAP shRNA (m) Lentiviral Particles: sc-63225-V.

Molecular Weight of WTAP: 47 kDa.

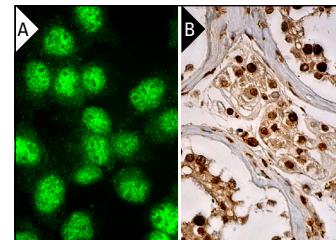
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



WTAP (D-7): sc-374280. Western blot analysis of WTAP expression in K-562 nuclear extract (A) and THP-1 (B) and NIH/3T3 (C) whole cell lysates.



WTAP (D-7): sc-374280. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

1. Zhou, J., et al. 2015. Dynamic m⁶A mRNA methylation directs translational control of heat shock response. *Nature* 526: 591-594.
2. Xiang, Y., et al. 2017. RNA m⁶A methylation regulates the ultraviolet-induced DNA damage response. *Nature* 543: 573-576.
3. Lesbirel, S., et al. 2018. The m⁶A-methylase complex recruits TREX and regulates mRNA export. *Sci. Rep.* 8: 13827.
4. Wu, C., et al. 2020. Interplay of m⁶A and H3K27 trimethylation restrains inflammation during bacterial infection. *Sci. Adv.* 6: eaba0647.
5. Dong, L., et al. 2021. Relaxed initiation pausing of ribosomes drives oncogenic translation. *Sci. Adv.* 7: eabd6927.
6. Shen, M., et al. 2021. N⁶-methyladenosine modification regulates ferroptosis through autophagy signaling pathway in hepatic stellate cells. *Redox Biol.* 47: 102151.
7. Xie, S.J., et al. 2021. Dynamic m⁶A mRNA methylation reveals the role of METTL3/14-m⁶A-MNK2-ERK signaling axis in skeletal muscle differentiation and regeneration. *Front. Cell Dev. Biol.* 9: 744171.
8. Li, K., et al. 2021. Stimulation of Let-7 maturation by metformin improved the response to tyrosine kinase inhibitor therapy in an m⁶A dependent manner. *Front. Oncol.* 11: 731561.
9. Jansens, R.J.J., et al. 2022. Alphaherpesvirus US3 protein-mediated inhibition of the m⁶A mRNA methyltransferase complex. *Cell Rep.* 40: 111107.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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