SANTA CRUZ BIOTECHNOLOGY, INC.

WTAP (H-306): sc-67389

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 Zn^{2+} 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 G_2/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.

REFERENCES

1. Branzei, D., et al. 2001. A novel protein interacts with the Werner's syndrome gene product physically and functionally. J. Biol. Chem. 276: 20364-20369.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605442. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Utsch, B., et al. 2003. Exclusion of WTAP and HOXA13 as candidate genes for isolated hypospadias. Scand. J. Urol. Nephrol. 37: 498-501.
4. Chen, B.F., et al. 2004. Immunohistochemical expression of Wilms' tumor 1 protein in nephroblastoma. J. Chin. Med. Assoc. 67: 506-510.
5. Horiuchi, K., et al. 2006. Wilms' tumor 1-associating protein regulates G_2/M transition through stabilization of cyclin A2 mRNA. Proc. Natl. Acad. Sci. USA 103: 17278-17283.
6. Rong, Y., et al. 2006. Wilms' tumor 1 and signal transducers and activators of transcription 3 synergistically promote cell proliferation: a possible mechanism in sporadic Wilms' tumor. Cancer Res. 66: 8049-8057.
7. Small, T.W., et al. 2006. Wilms' tumor 1-associating protein regulates the proliferation of vascular smooth muscle cells. Circ. Res. 99: 1338-1346.

CHROMOSOMAL LOCATION

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

SOURCE

WTAP (H-306) is a rabbit polyclonal antibody raised against amino acids 91-201 mapping near the C-terminus of WTAP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

WTAP (H-306) is recommended for detection of WTAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

WTAP (H-306) is also recommended for detection of WTAP in additional species, including equine, canine, bovine, porcine and avian.

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.

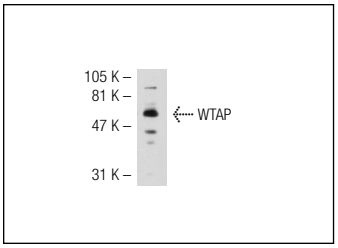
Molecular Weight of WTAP: 47 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



WTAP (H-306): sc-67389. Western blot analysis of WTAP expression in K-562 nuclear extract.

RESEARCH USE

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