SANTA CRUZ BIOTECHNOLOGY, INC.

WDR79 (1F12): sc-517078

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. WDR79 (WD repeat-containing protein 79), also known as TCAB1 or WRAP53, is a 548 amino acid nuclear protein that is expressed in all tissues. WDR79 is a component of the telomerase holoenzyme complex, which is a ribonucleoprotein complex that is essential for replication of chromosome termini that elongates telomeres in most eukaryotes and controls telomerase localization to Cajal body. The mRNA encoding WDR79 plays a critical role in maintaining basal p53 mRNA levels and in p53 induction upon DNA damage.

REFERENCES

1. van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. FEBS Lett. 307: 131-134.
2. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
3. Garcia-Closas, M., et al. 2007. Common genetic variation in TP53 and its flanking genes, WDR79 and ATP1B2, and susceptibility to breast cancer. Int. J. Cancer 121: 2532-2538.
4. Farnebo, M. 2009. Wrap53, a novel regulator of p53. Cell Cycle 8: 2343-2346.
5. Mahmoudi, S., et al. 2009. Wrap53, a natural p53 antisense transcript required for p53 induction upon DNA damage. Mol. Cell 33: 462-471.
6. Tycowski, K.T., et al. 2009. A conserved WD40 protein binds the Cajal body localization signal of scaRNP particles. Mol. Cell 34: 47-57.
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8. Alonso, S., et al. 2010. The diversity profile of TP53 is influenced by positive selection on the immediately upstream locus WDR79. Hum. Hered. 69: 34-44.
9. Mahmoudi, S., et al. 2010. WRAP53 is essential for Cajal body formation and for targeting the survival of motor neuron complex to Cajal bodies. PLoS Biol. 8: e1000521.

CHROMOSOMAL LOCATION

Genetic locus: WRAP53 (human) mapping to 17p13.1.

SOURCE

WDR79 (1F12) is a mouse monoclonal antibody raised against amino acids 62-160 representing partial length WDR79 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

WDR79 (1F12) is recommended for detection of WDR79 of 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).

Suitable for use as control antibody for WDR79 siRNA (h): sc-93974, WDR79 shRNA Plasmid (h): sc-93974-SH and WDR79 shRNA (h) Lentiviral Particles: sc-93974-V.

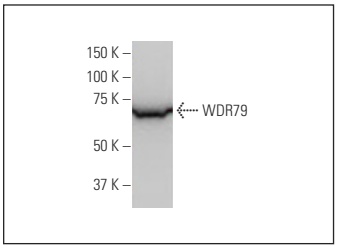
Molecular Weight of WDR79: 59 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

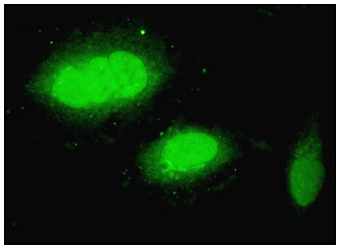
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



WDR79 (1F12); sc-517078. Western blot analysis of WDR79 expression in A-431 whole cell lysate.



WDR79 (1F12); sc-517078. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.