

WDR4 (S-20): sc-83348

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. WDR4 (WD-repeat-containing protein 4), also known as TRM82, is a 412 amino acid protein that contains two WD-repeats. Expressed as multiple isoforms due to alternative splicing events, WDR4 forms a complex with METTL1 (methyltransferase like 1) that is necessary for the 7-methylguanosine modification of tRNA. Defects in the gene encoding WDR4 may be associated with the development of Down syndrome, a chromosomal disorder characterized by deformed physical features and mental retardation.

REFERENCES

1. van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. *FEBS Lett.* 307: 131-134.
2. Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
3. Garcia-Higuera, I., Fenoglio, J., Li, Y., Lewis, C., Panchenko, M.P., Reiner, O., Smith, T.F. and Neer, E.J. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. *Biochemistry* 35: 13985-13994.
4. Garcia-Higuera, I., Gaitatzes, C., Smith, T.F. and Neer, E.J. 1998. Folding a WD repeat propeller. Role of highly conserved aspartic acid residues in the G protein β subunit and Sec13. *J. Biol. Chem.* 273: 9041-9049.
5. Smith, T.F., Gaitatzes, C., Saxena, K. and Neer, E.J. 1999. The WD repeat: a common architecture for diverse functions. *Trends Biochem. Sci.* 24: 181-185.

CHROMOSOMAL LOCATION

Genetic locus: WDR4 (human) mapping to 21q22.3; Wdr4 (mouse) mapping to 17 B1.

SOURCE

WDR4 (S-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of WDR4 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83348 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

WDR4 (S-20) is recommended for detection of WDR4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with family member WDR5.

WDR4 (S-20) is also recommended for detection of WDR4 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for WDR4 siRNA (h): sc-91529, WDR4 siRNA (m): sc-155281, WDR4 shRNA Plasmid (h): sc-91529-SH, WDR4 shRNA Plasmid (m): sc-155281-SH, WDR4 shRNA (h) Lentiviral Particles: sc-91529-V and WDR4 shRNA (m) Lentiviral Particles: sc-155281-V.

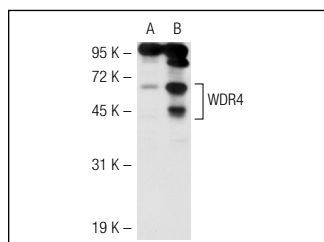
Molecular Weight of WDR4: 45 kDa.

Positive Controls: WDR4 (m): 293T Lysate: sc-124624, MIA PaCa-2 cell lysate: sc-2285, or A549 cell lysate: sc-2413.

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



WDR4 (S-20): sc-83348. Western blot analysis of WDR4 expression in non-transfected: sc-117752 (A) and mouse WDR4 transfected: sc-124624 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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