

WDR77 (S-16): sc-163533

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. Proteins that contain WD-repeats participate in a wide range of cellular functions, however they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. WDR77 (WD-repeat domain 77), also known as MEP50, is a 342 amino acid protein that contains 5 WD-repeats and is thought to regulate the early assembly of U snRNPs. Additionally, WDR77 functions as a component of a PRMT5-containing methyltransferase complex that converts arginines to dimethylarginines in a variety of spliceosomal Sm proteins. This conversion subsequently targets Sm proteins to the survival of motor neurons (SMN) complex where they are assembled into ribonucleoprotein core particles. Based on its involvement with the methyltransferase complex, WDR77 is thought to be involved in the development of testicular tumors, suggesting a role in carcinogenesis.

REFERENCES

1. Friesen, W.J., et al. 2002. A novel WD repeat protein component of the methylosome binds Sm proteins. *J. Biol. Chem.* 277: 8243-8247.
2. Licciardo, P., et al. 2003. The FCP1 phosphatase interacts with RNA polymerase II and with MEP50 a component of the methylosome complex involved in the assembly of snRNP. *Nucleic Acids Res.* 31: 999-1005.
3. Cavey, M., et al. 2005. *Drosophila valois* encodes a divergent WD protein that is required for Vasa localization and oskar protein accumulation. *Development* 132: 459-468.
4. Anne, J., et al. 2005. Valois, a component of the nuage and pole plasm, is involved in assembly of these structures, and binds to Tudor and the methyltransferase Capsuléen. *Development* 132: 2167-2177.
5. Amente, S., et al. 2005. Identification of proteins interacting with the RNAPII FCP1 phosphatase: FCP1 forms a complex with arginine methyltransferase PRMT5 and it is a substrate for PRMT5-mediated methylation. *FEBS Lett.* 579: 683-689.
6. Furuno, K., et al. 2006. Association of polycomb group SUZ12 with WD-repeat protein MEP50 that binds to Histone H2A selectively *in vitro*. *Biochem. Biophys. Res. Commun.* 345: 1051-1058.

CHROMOSOMAL LOCATION

Genetic locus: WDR77 (human) mapping to 1p13.2; Wdr77 (mouse) mapping to 3 F2.2.

SOURCE

WDR77 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WDR77 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-163533 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WDR77 (S-16) is recommended for detection of WDR77 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other WDR family members.

WDR77 (S-16) is also recommended for detection of WDR77 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WDR77 siRNA (h): sc-88686, WDR77 siRNA (m): sc-155317, WDR77 shRNA Plasmid (h): sc-88686-SH, WDR77 shRNA Plasmid (m): sc-155317-SH, WDR77 shRNA (h) Lentiviral Particles: sc-88686-V and WDR77 shRNA (m) Lentiviral Particles: sc-155317-V.

Molecular Weight (predicted) of WDR77: 37 kDa.

Molecular Weight (observed) of WDR77: 38-46 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **WDR77 (C-2): sc-376549** or **WDR77 (A-4): sc-376556**, our highly recommended monoclonal alternatives to WDR77 (S-16).