

WDR77 (A-4): sc-376556

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 five 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.

SOURCE

WDR77 (A-4) is a mouse monoclonal antibody raised against amino acids 43-342 mapping at the C-terminus of WDR77 of human origin.

PRODUCT

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

APPLICATIONS

WDR77 (A-4) is recommended for detection of WDR77 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight (predicted) of WDR77: 37 kDa.

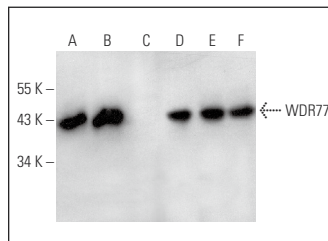
Molecular Weight (observed) of WDR77: 38-46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

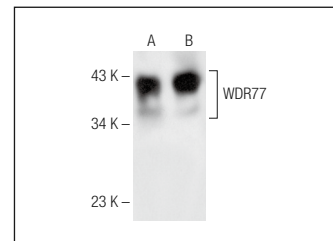
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



WDR77 (A-4): sc-376556. Western blot analysis of WDR77 expression in HeLa (A), Jurkat (B), NIH/3T3 (C), LNCaP (D), Hep G2 (E) and MCF7 (F) whole cell lysates. Note lack of reactivity with mouse WDR77 in Lane C.



WDR77 (A-4): sc-376556. Western blot analysis of WDR77 expression in HeLa (A) and SJRH30 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2017. USP9X regulates centrosome duplication and promotes breast carcinogenesis. *Nat. Commun.* 8: 14866.

STORAGE

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

RESEARCH USE

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