

WDR77 (m): 293T Lysate: sc-124638

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.
7. Le Guezennec, X., et al. 2006. MBD2/NuRD and MBD3/NuRD, two distinct complexes with different biochemical and functional properties. *Mol. Cell. Biol.* 26: 843-851.
8. Liang, J.J., et al. 2007. The expression and function of androgen receptor coactivator p44 and protein arginine methyltransferase 5 in the developing testis and testicular tumors. *J. Urol.* 177: 1918-1922.
9. Peng, Y., et al. 2008. Distinct nuclear and cytoplasmic functions of androgen receptor cofactor p44 and association with androgen-independent prostate cancer. *Proc. Natl. Acad. Sci. USA* 105: 5236-5241.

CHROMOSOMAL LOCATION

Genetic locus: Wdr77 (mouse) mapping to 3 F2.2.

PRODUCT

WDR77 (m): 293T Lysate represents a lysate of mouse WDR77 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

WDR77 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive WDR77 antibodies. Recommended use: 10-20 µl per lane.

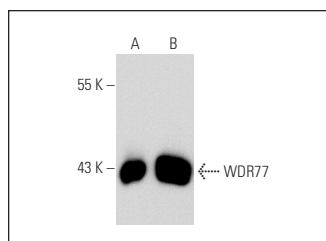
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

WDR77 (FG-4): sc-100899 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse WDR77 expression in WDR77 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



WDR77 (FG-4): sc-100899. Western blot analysis of WDR77 expression in non-transfected: sc-117752 (A) and mouse WDR77 transfected: sc-124638 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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