

# WDR5 (A-6): sc-393116



The Power to Question

## BACKGROUND

WD-repeat protein 5 (WDR5, also designated BMP-2-induced gene 3 kb or BIG-3) belongs to the family of WD-40 repeat proteins, and is essential for vertebrate development, Hox gene activation and global H3K4 trimethylation. WDR5 is a conserved subunit of Trithorax (TRX) histone methyltransferase complexes that selectively binds to dimethylated Lys4 (K4me2) in Histone H3 to promote K4 trimethylation by TRX. It is expressed in osteoblasts, chondrocytes, osteocytes and marrow stromal cells. The WDR5 protein contains seven WD-repeats, which may play a role in its function of accelerating osteoblast differentiation.

## REFERENCES

- Wysocka, J., et al. 2005. WDR5 associates with Histone H3 methylated at K4 and is essential for H3 K4 methylation and vertebrate development. *Cell* 121: 859-872.
- Gori, F., et al. 2005. WDR5, a novel WD repeat protein, regulates osteo *in vivo*. *J. Musculoskelet. Neuronal Interact.* 5: 338-339.
- Couture, J.F., et al. 2006. Molecular recognition of Histone H3 by the WD40 protein WDR5. *Nat. Struct. Mol. Biol.* 13: 698-703.
- Ruthenburg, A.J., et al. 2006. Histone H3 recognition and presentation by the WDR5 module of the MLL1 complex. *Nat. Struct. Mol. Biol.* 13: 704-712.
- Gori, F., et al. 2006. WDR5, a WD-40 protein, regulates osteoblast differentiation during embryonic bone development. *Dev. Biol.* 295: 498-506.
- Wysocka, J., et al. 2006. A PHD finger of NURF couples Histone H3 lysine 4 trimethylation with chromatin remodelling. *Nature* 442: 86-90.
- Han, Z., et al. 2006. Structural basis for the specific recognition of methylated Histone H3 lysine 4 by the WD-40 protein WDR5. *Mol. Cell* 22: 137-144.

## CHROMOSOMAL LOCATION

Genetic locus: WDR5 (human) mapping to 9q34.2; Wdr5 (mouse) mapping to 2 A3.

## SOURCE

WDR5 (A-6) is a mouse monoclonal antibody raised against amino acids 1-35 mapping at the N-terminus of WDR5 of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

WDR5 (A-6) is recommended for detection of WDR5 of mouse, rat and 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).

WDR5 (A-6) is also recommended for detection of WDR5 in additional species, including equine and canine.

Suitable for use as control antibody for WDR5 siRNA (h): sc-61798, WDR5 siRNA (m): sc-61799, WDR5 shRNA Plasmid (h): sc-61798-SH, WDR5 shRNA Plasmid (m): sc-61799-SH, WDR5 shRNA (h) Lentiviral Particles: sc-61798-V and WDR5 shRNA (m) Lentiviral Particles: sc-61799-V.

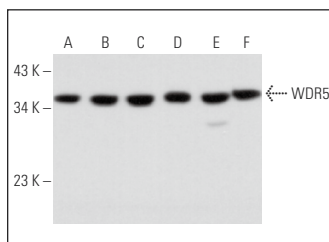
Molecular Weight of WDR5: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or A-431 whole cell lysate: sc-2201.

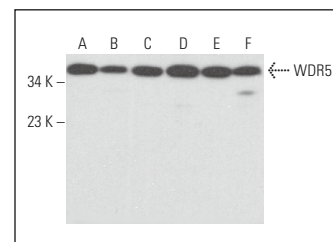
## RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (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



WDR5 (A-6): sc-393116. Western blot analysis of WDR5 expression in A2058 (A), NTERA-2 cl.D1 (B), A-431 (C), 3T3-L1 (D), 3611-RF (E) and HeLa (F) whole cell lysates.



WDR5 (A-6): sc-393116. Western blot analysis of WDR5 expression in NTERA-2 cl.D1 (A), WI-38 (B), COLO 205 (C), NIH/3T3 (D), RAW 264.7 (E) and Sol8 (F) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Zhang, C., et al. 2022. Histone methyltransferase MLL1 drives renal tubular cell apoptosis by p53-dependent repression of E-cadherin during cisplatin-induced acute kidney injury. *Cell Death Dis.* 13: 770.

## RESEARCH USE

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