

WDR5/5B (C-15): sc-47572

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. WDR5B (WD repeat domain 5B) is a 330 amino acid member of the WD repeat family. WDR5B is a probable substrate receptor subunit of a CUL-RING E3 protein ligase complex, and has been found to interact with CUL-4B and DDB1. Both WDR5 and WDR5B contain seven WD-repeats.

REFERENCES

1. Wysocka, J., Swigut, T., Milne, T.A., Dou, Y., Zhang, X., Burlingame, A.L., Roeder, R.G., Brivanlou, A.H. and Allis, C.D. 2005. WDR5 associates with Histone H3 methylated at K4 and is essential for H3 K4 methylation and vertebrate development. *Cell* 121: 859-872.
2. Gori, F., Friedman, L. and Demay, M.B. 2005. WDR5, a novel WD repeat protein, regulates osteo *in vivo*. *J. Musculoskelet. Neuronal Interact.* 5: 338-339.
3. Couture, J.F., Collazo, E. and Trievel, R.C. 2006. Molecular recognition of Histone H3 by the WD40 protein WDR5. *Nat. Struct. Mol. Biol.* 13: 698-703.
4. Ruthenburg, A.J., Wang, W., Graybosch, D.M., Li, H., Allis, C.D., Patel, D.J. and Verdine, G.L. 2006. Histone H3 recognition and presentation by the WDR5 module of the MLL1 complex. *Nat. Struct. Mol. Biol.* 13: 704-712.
5. Gori, F., Friedman, L.G. and Demay, M.B. 2006. WDR5, a WD-40 protein, regulates osteoblast differentiation during embryonic bone development. *Dev. Biol.* 295: 498-506.
6. Wysocka, J., Swigut, T., Xiao, H., Milne, T.A., Kwon, S.Y., Landry, J., Kauer, M., Tackett, A.J., Chait, B.T., Badenhorst, P., Wu, C. and Allis, C.D. 2006. A PHD finger of NURF couples Histone H3 lysine 4 trimethylation with chromatin remodelling. *Nature* 442: 86-90.

CHROMOSOMAL LOCATION

Genetic locus: WDR5 (human) mapping to 9q34.2, WDR5B (human) mapping to 3q21.1; Wdr5 (mouse) mapping to 2 A3, Wdr5b (mouse) mapping to 16 B3.

SOURCE

WDR5/5B (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WDR5 of human origin.

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-47572 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WDR5/5B (C-15) is recommended for detection of WDR5 and WDR5B of mouse 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).

WDR5/5B (C-15) is also recommended for detection of WDR5 and WDR5B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of WDR5/5B: 34 kDa.

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.

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.

PROTOCOLS

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



Try **WDR5 (G-9): sc-393080**, our highly recommended monoclonal alternative to WDR5/5B (C-15).