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.

CHROMOSOMAL LOCATION

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

SOURCE

WDR5 (G-9) 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 IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. WDR5 (G-9) is available conjugated to agarose (sc-393080 AC), 500 µg/0.25 ml cytos, osteocytes and marrow stromal cells. The WDR5 protein contains seven WD-repeats, which may play a role in its function of accelerating osteoblast differentiation.

APPLICATIONS

WDR5 (G-9) 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), immunohistochemistry (including paraffin-embedded sections) (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 (G-9) 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: NIH/3T3 whole cell lysate: sc-2210, PC-12 cell lysate: sc-2250 or RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG1 BP-HRP: sc-516102 or m-IgG1 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-IgG1 BP-FITC: sc-516140 or m-IgG1 BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG1 BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

![Western blot analysis of WDR5 expression in Wi-38 (A), COLO 205 (B), Soll (C), NIH/3T3 (D), PC-12 (E) and RAW 264.7 (F) whole cell lysates.](image)

![Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing nuclear staining of cells in seminiferous ducts and nuclear and cytoplasmic staining of Leydig cells (A). Immunofluorescence staining of formalin fixed A-431 cells showing nuclear localization (B).](image)

SELECT PRODUCT CITATIONS


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 for detailed protocols and support products.