

WDR5 (G-9): sc-393080

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 2 A3.

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 agarose in 1 ml, for IP; to HRP (sc-393080 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393080 PE), fluorescein (sc-393080 FITC), Alexa Fluor® 488 (sc-393080 AF488), Alexa Fluor® 546 (sc-393080 AF546), Alexa Fluor® 594 (sc-393080 AF594) or Alexa Fluor® 647 (sc-393080 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393080 AF680) or Alexa Fluor® 790 (sc-393080 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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.

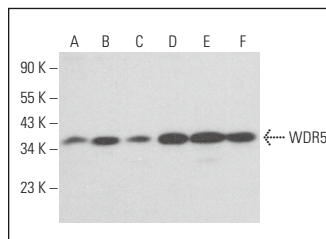
Molecular Weight of WDR5: 34 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, PC-12 cell lysate: sc-2250 or RAW 264.7 whole cell lysate: sc-2211.

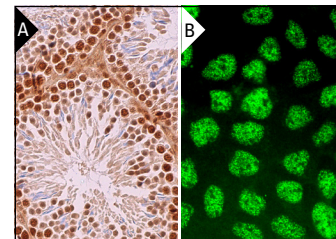
STORAGE

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

DATA



WDR5 (G-9): sc-393080. Western blot analysis of WDR5 expression in W1-38 (A), COLO 205 (B), Sol8 (C), NIH/3T3 (D), PC-12 (E) and RAW 264.7 (F) whole cell lysates.



WDR5 (G-9): sc-393080. 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).

SELECT PRODUCT CITATIONS

- Xu, Y., et al. 2017. Regulation of endothelial intracellular adenosine via adenosine kinase epigenetically modulates vascular inflammation. *Nat. Commun.* 8: 943.
- Bieluszewska, A., et al. 2018. PKA-binding domain of AKAP8 is essential for direct interaction with DPY30 protein. *FEBS J.* 285: 947-964.
- Ma, D., et al. 2018. Upon infection the cellular WD repeat-containing protein 5 (WDR5) localizes to cytoplasmic inclusion bodies and enhances measles virus replication. *J. Virol.* 92: e01726-17.
- Singhal, N.K., et al. 2020. Betaine restores epigenetic control and supports neuronal mitochondria in the cuprizone mouse model of multiple sclerosis. *Epigenetics* 15: 871-886.
- Park, S.H., et al. 2021. Posttranslational regulation of FOXA1 by polycomb and BUB3/USP7 deubiquitin complex in prostate cancer. *Sci. Adv.* 7: eabe2261.
- Hänle-Kreidler, S., et al. 2022. The SCF-FBXW7 E3 ubiquitin ligase triggers degradation of Histone 3 Lysine 4 methyltransferase complex component WDR5 to prevent mitotic slippage. *J. Biol. Chem.* 298: 102703.
- Schwalm, M.P., et al. 2023. Tracking the PROTAC degradation pathway in living cells highlights the importance of ternary complex measurement for PROTAC optimization. *Cell Chem. Biol.* 30: 753-765.e8.
- Yu, X., et al. 2023. Discovery of potent and selective WDR5 proteolysis targeting chimeras as potential therapeutics for pancreatic cancer. *J. Med. Chem.* 66: 16168-16186.
- Deng, K., et al. 2024. The Wdr5-H3K4me3 epigenetic axis regulates pancreatic tumor immunogenicity and immune suppression. *Int. J. Mol. Sci.* 25: 8773.

RESEARCH USE

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