SANTA CRUZ BIOTECHNOLOGY, INC.

WAPL (A-7): sc-365189

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WAPL (wings apart-like), also known as WAPAL or FOE, is a 1,190 amino acid protein that contains one WAPL domain and is expressed as two alternatively spliced isoforms, one of which localizes to the nucleus. Expressed in an isoform-dependent manner in heart, skeletal muscle and uterine cervix tumor tissue, WAPL is involved in sister-chromatid adhesion and overall cell growth, specifically playing a role in the development and metastasis of cancerous tissue. The gene encoding WAPL maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

CHROMOSOMAL LOCATION

Genetic locus: WAPAL (human) mapping to 10q23.2.

SOURCE

WAPL (A-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of WAPL of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

WAPL (A-7) is available conjugated to agarose (sc-365189 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365189 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365189 PE), fluorescein (sc-365189 FITC), Alexa Fluor® 488 (sc-365189 AF488), Alexa Fluor® 546 (sc-365189 AF546), Alexa Fluor® 594 (sc-365189 AF594) or Alexa Fluor® 647 (sc-365189 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365189 AF680) or Alexa Fluor® 790 (sc-365189 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

WAPL (A-7) is recommended for detection of WAPL of 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).

Suitable for use as control antibody for WAPL siRNA (h): sc-76910, WAPL shRNA Plasmid (h): sc-76910-SH and WAPL shRNA (h) Lentiviral Particles: sc-76910-V.

Molecular Weight of WAPL: 140 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa nuclear extract: sc-2120.

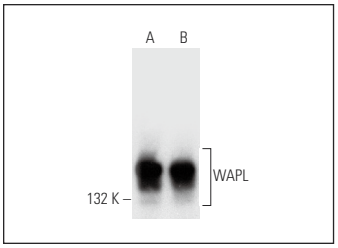
STORAGE

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

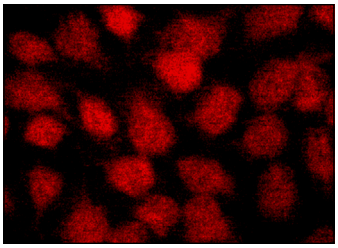
RESEARCH USE

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

DATA



WAPL (A-7): sc-365189. Western blot analysis of WAPL expression in HeLa nuclear extract (**A**) and Hep G2 whole cell lysate (**B**).



WAPL (A-7): sc-365189. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

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3. Lyu, X., et al. 2018. Architectural proteins and pluripotency factors cooperate to orchestrate the transcriptional response of hESCs to temperature stress. Mol. Cell 71: 940-955.e7.
4. Kim, J.S., et al. 2019. Systematic proteomics of endogenous human cohesin reveals an interaction with diverse splicing factors and RNA binding proteins required for mitotic progression. J. Biol. Chem. 294: 8760-8772.
5. Luppino, J.M., et al. 2020. Cohesin promotes stochastic domain intermingling to ensure proper regulation of boundary-proximal genes. Nat. Genet. 52: 840-848.
6. Almacellas, E., et al. 2021. Lysosomal degradation ensures accurate chromosomal segregation to prevent chromosomal instability. Autophagy 17: 796-813.
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8. Haarhuis, J.H.I., et al. 2022. A mediator-cohesin axis controls heterochromatin domain formation. Nat. Commun. 13: 754.
9. van Ruiten, M.S., et al. 2022. The cohesin acetylation cycle controls chromatin loop length through a PDS5A brake mechanism. Nat. Struct. Mol. Biol. 29: 586-591.
10. Yu, Z., et al. 2023. ATM signaling modulates cohesin behavior in meiotic prophase and proliferating cells. Nat. Struct. Mol. Biol. 30: 436-450.

PROTOCOLS

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