SANTA CRUZ BIOTECHNOLOGY, INC.

WDFY3 (B-4): sc-514569

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. WDFY3 (WD repeat and FYVE domain containing 3), also known as ALFY (autophagy-linked FYVE protein) is a 3,526 amino acid protein that localizes to the cytoplasmic side of peripheral membranes. Ubiquitously expressed, WDFY3 co-localizes with autophagic structures in starved cells and is expressed in liver, brain and kidney. WDFY3 exists as two alternatively spliced isoforms and contains one BEACH domain, one FYVE-type zinc finger, a pair of LRR (leucine-rich) repeats and five WD repeats.

REFERENCES

1. Gaullier, J.M., et al. 1998. FYVE fingers bind PtdIns(3)P. Nature 394: 432-433.
2. Gillooly, D.J., et al. 2001. Cellular functions of phosphatidylinositol 3-phosphate and FYVE domain proteins. Biochem. J. 355: 249-258.
3. Chen, G.Y., et al. 2004. Expression profile of mouse BWF1, a protein with a BEACH domain, WD40 domain and FYVE domain. Cell Struct. Funct. 29: 35-42.
4. Hayakawa, A., et al. 2004. Structural basis for endosomal targeting by FYVE domains. J. Biol. Chem. 279: 5958-5966.
5. Simonsen, A., et al. 2004. Alfy, a novel FYVE-domain-containing protein associated with protein granules and autophagic membranes. J. Cell Sci. 117: 4239-4251.

CHROMOSOMAL LOCATION

Genetic locus: WDFY3 (human) mapping to 4q21.23; Wdfy3 (mouse) mapping to 5 E4.

SOURCE

WDFY3 (B-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of WDFY3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514569 X, 200 µg/0.1 ml.

WDFY3 (B-4) is available conjugated to agarose (sc-514569 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514569 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514569 PE), fluorescein (sc-514569 FITC), Alexa Fluor® 488 (sc-514569 AF488), Alexa Fluor® 546 (sc-514569 AF546), Alexa Fluor® 594 (sc-514569 AF594) or Alexa Fluor® 647 (sc-514569 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514569 AF680) or Alexa Fluor® 790 (sc-514569 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

WDFY3 (B-4) is recommended for detection of WDFY3 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).

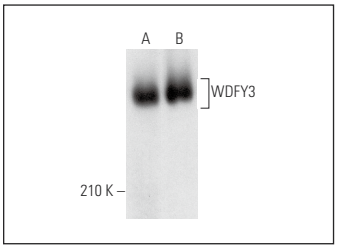
Suitable for use as control antibody for WDFY3 siRNA (h): sc-89191, WDFY3 siRNA (m): sc-155253, WDFY3 shRNA Plasmid (h): sc-89191-SH, WDFY3 shRNA Plasmid (m): sc-155253-SH, WDFY3 shRNA (h) Lentiviral Particles: sc-89191-V and WDFY3 shRNA (m) Lentiviral Particles: sc-155253-V.

WDFY3 (B-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

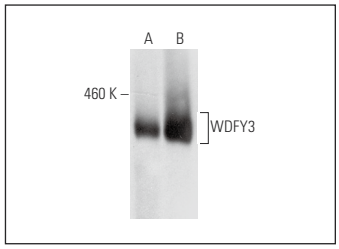
Molecular Weight of WDFY3: 395 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or T98G cell lysate: sc-2294.

DATA



WDFY3 (B-4): sc-514569. Western blot analysis of WDFY3 expression in HeLa (**A**) and T98G (**B**) whole cell lysates.



WDFY3 (B-4): sc-514569. Western blot analysis of WDFY3 expression in HeLa (**A**) and T98G (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mestres, I., et al. 2020. Smad anchor for receptor activation nuclear localization during development identifies Layers V and VI of the neocortex. J. Comp. Neurol. 528: 2161-2173.
2. Kallergi, E., et al. 2023. Profiling of purified autophagic vesicle degradome in the maturing and aging brain. Neuron 111: 2329-2347.e7.

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.