SANTA CRUZ BIOTECHNOLOGY, INC.

WDFY2 (C-20): sc-84658

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

WD repeat and FYVE domain-containing protein 2 (WDFY2), also known as WDF2 and ZFYVE22, is a 400 amino acid protein that localizes to a set of small endosomes that are found within 100 nm from the plasma membrane. Highly conserved between species, WDFY2 consists of one FYVE-type zinc finger and seven WD repeats. The FYVE domain is a cysteine-rich domain of about 70 amino acids. Its primary role is to target signal-transducing proteins to cell membranes through binding to the membrane lipid phosphatidylinositol-3-phosphate with high specificity. WD-repeats are generally found in clusters of seven. They have no intrinsic catalytic activity, but they serve as a platform for protein-protein interactions. WDFY2 is suspected to play a critical role in the endocytic pathway.

REFERENCES

1. Gaullier, J.M., et al. 1998. FYVE fingers bind PtdIns(3)P. Nature 394: 432-433.
2. Patki, V., et al. 1998. A functional PtdIns(3)P-binding motif. Nature 394: 433-434.
3. Gillooly, D.J., et al. 2001. Cellular functions of phosphatidylinositol 3-phosphate and FYVE domain proteins. Biochem. J. 355: 249-258.
4. Hayakawa, A., et al. 2004. Structural basis for endosomal targeting by FYVE domains. J. Biol. Chem. 279: 5958-5966.
5. Fritzius, T., et al. 2006. A WD-FYVE protein binds to the kinases Akt and PKCζ/lambda. Biochem. J. 399: 9-20.
6. Hayakawa, A., et al. 2006. The WD40 and FYVE domain containing protein 2 defines a class of early endosomes necessary for endocytosis. Proc. Natl. Acad. Sci. USA 103: 11928-11933.
7. Hayakawa, A., et al. 2007. Evolutionarily conserved structural and functional roles of the FYVE domain. Biochem. Soc. Symp. 74: 95-105.

CHROMOSOMAL LOCATION

Genetic locus: WDFY2 (human) mapping to 13q14.3; Wdfy2 (mouse) mapping to 14 D1.

SOURCE

WDFY2 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of WDFY2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84658 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

WDFY2 (C-20) is recommended for detection of WDFY2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

WDFY2 (C-20) is also recommended for detection of WDFY2 in additional species, including equine, canine and avian.

Suitable for use as control antibody for WDFY2 siRNA (h): sc-76912, WDFY2 siRNA (m): sc-155252, WDFY2 shRNA Plasmid (h): sc-76912-SH, WDFY2 shRNA Plasmid (m): sc-155252-SH, WDFY2 shRNA (h) Lentiviral Particles: sc-76912-V and WDFY2 shRNA (m) Lentiviral Particles: sc-155252-V.

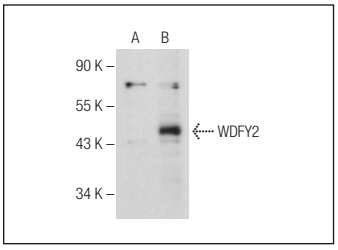
Molecular Weight of WDFY2: 45 kDa.

Positive Controls: WDFY2 (h): 293T Lysate: sc-371325 or MCF7 whole cell lysate: sc-2206.

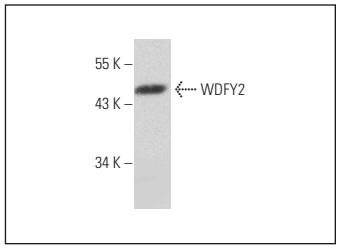
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



WDFY2 (C-20): sc-84658. Western blot analysis of WDFY2 expression in non-transfected: sc-117752 (**A**) and human WDFY2 transfected: sc-371325 (**B**) 293T whole cell lysates.



WDFY2 (C-20): sc-84658. Western blot analysis of WDFY2 expression in MCF7 whole cell lysate.

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.