SANTA CRUZ BIOTECHNOLOGY, INC.

WDR7 (N-20): sc-85210

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, which 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 involving signal transduction, apoptosis, transcriptional regulation and cell cycle control. WD repeats serve as sites for protein-protein interaction and some seem to mediate the assembly of protein complexes. With nine WD repeats, WDR7 (WD repeat-containing protein 7), also known as TGF-β resistance-associated protein (TRAG) and rabconnectin-3 β, is a 1490 amino acid protein that is abundantly expressed in brain and colocalizes with rabconnectin-3 on synaptic vesicles. Unlike rabconnectin-3, WDR7 binds directly to Rab3 GDP/GTP exchange protein and may therefore play a role in cell proliferation and survival. There are two isoforms of WDR7 that are produced as a result of alternative splicing events.

REFERENCES

1. Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. Nature 371: 297-300.
2. Garcia-Higuera, I., Fenoglio, J., Li, Y., Lewis, C., Panchenko, M.P., Reiner, O., Smith, T.F. and Neer, E.J. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. Biochemistry 35: 13985-13994.
3. Smith, T.F., Gaitatzes, C., Saxena, K. and Neer, E.J. 1999. The WD repeat: a common architecture for diverse functions. Trends Biochem. Sci. 24: 181-185.
4. Sanders, S., Keck-Waggoner, C.L., Zimonjic, D.B., Popescu, N.C. and Thorgeirsson, S.S. 2000. Assignment of WDR7 (alias TRAG, TGF-β resistance associated gene) to orthologous regions of human chromosome 18q21.1→q22 and mouse chromosome 18D.1-E.3 by fluorescence *in situ* hybridization. Cytogenet. Cell Genet. 88: 324-325.
5. Yu, L., Gaitatzes, C., Neer, E. and Smith, T.F. 2000. Thirty-plus functional families from a single motif. Protein Sci. 9: 2470-2476.
6. Li, D. and Roberts, R. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. Cell. Mol. Life Sci. 58: 2085-2097.
7. Kawabe, H., Sakisaka, T., Yasumi, M., Shingai, T., Izumi, G., Nagano, F., Deguchi-Tawarada, M., Takeuchi, M., Nakanishi, H. and Takai, Y. 2003. A novel rabconnectin-3-binding protein that directly binds a GDP/GTP exchange protein for Rab3A small G protein implicated in Ca^{2+}-dependent exocytosis of neurotransmitter. Genes Cells. 8: 537-546.
8. van Nocker, S. and Ludwig, P. 2003. The WD-repeat protein superfamily in *Arabidopsis:* conservation and divergence in structure and function. BMC Genomics. 4: 50.

CHROMOSOMAL LOCATION

Genetic locus: WDR7 (human) mapping to 18q21.31; Wdr7 (mouse) mapping to 18 E1.

SOURCE

WDR7 (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of WDR7 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-85210 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WDR7 (N-20) is recommended for detection of WDR7 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); non cross-reactive with WDR4 and WDR5.

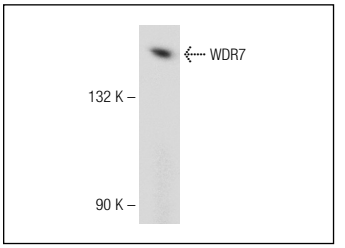
WDR7 (N-20) is also recommended for detection of WDR7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WDR7 siRNA (h): sc-76913, WDR7 siRNA (m): sc-155310, WDR7 shRNA Plasmid (h): sc-76913-SH, WDR7 shRNA Plasmid (m): sc-155310-SH, WDR7 shRNA (h) Lentiviral Particles: sc-76913-V and WDR7 shRNA (m) Lentiviral Particles: sc-155310-V.

Molecular Weight of WDR7: 164 kDa.

Positive Controls: rat brain extract: sc-2392.

DATA



WDR7 (N-20): sc-85210. Western blot analysis of WDR7 expression in rat brain tissue extract.

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 or our catalog for detailed protocols and support products.