

WDR6 (N-14): sc-99719

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. WDR6 (WD repeat-containing protein 6) is a 1,121 amino acid protein that contains 11 WD repeats, which are clustered into two distinct groups separated by a transmembrane domain. Displaying high expression in the hypothalamus, WDR6 levels appear to decrease with caloric restriction. Through involvement with the Insulin/IGF-I signaling pathway, WDR6 may play a role in feeding behavior regulation and longevity in the brain.

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. Yu, L., Gaitatzes, C., Neer, E. and Smith, T.F. 2000. Thirty-plus functional families from a single motif. *Protein Sci.* 9: 2470-2476.
5. Li, D., Burch, P., Gonzalez, O., Kashork, C.D., Shaffer, L.G., Bachinski, L.L. and Roberts, R. 2000. Molecular cloning, expression analysis, and chromosome mapping of WDR6, a novel human WD-repeat gene. *Biochem. Biophys. Res. Commun.* 274: 117-123.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606031. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Xie, X., Wang, Z. and Chen, Y. 2007. Association of LKB1 with a WD-repeat protein WDR6 is implicated in cell growth arrest and p27(Kip1) induction. *Mol. Cell. Biochem.* 301: 115-122.
8. Chiba, T., Inoue, D., Mizuno, A., Komatsu, T., Fujita, S., Kubota, H., Luisa Tagliaro, M., Park, S., Trindade, L.S., Hayashida, T., Hayashi, H., Yamaza, H., Higami, Y. and Shimokawa, I. 2009. Identification and characterization of an Insulin receptor substrate 4-interacting protein in rat brain: implications for longevity. *Neurobiol. Aging* 30: 474-482.

CHROMOSOMAL LOCATION

Genetic locus: WDR6 (human) mapping to 3p21.31.

RESEARCH USE

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

SOURCE

WDR6 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of WDR6 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99719 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WDR6 (N-14) is recommended for detection of WDR6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other WDR family members.

WDR6 (N-14) is also recommended for detection of WDR6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for WDR6 siRNA (h): sc-78080, WDR6 shRNA Plasmid (h): sc-78080-SH and WDR6 shRNA (h) Lentiviral Particles: sc-78080-V.

Molecular Weight of WDR6: 122 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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