

WDR21A (G-12): sc-139107

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. WDR21A (WD repeat-containing protein 21A), also known as DCAF4 (DDB1 and CUL-4 associated factor 4) or WDR21, is a 495 amino acid protein that contains 2 WD repeats and may function as a substrate receptor for the CUL-4-DDB1 E3 ubiquitin-protein ligase complex. WDR21A is suggested to participate in protein modification and ubiquitination. WDR21A exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 14q24.2.

REFERENCES

1. van der Voorn, L., et al. 1992. The WD-40 repeat. *FEBS Lett.* 307: 131-134.
2. Neer, E.J., et al. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
3. Garcia-Higuera, I., et al. 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.
4. Garcia-Higuera, I., et al. 1998. Folding a WD repeat propeller. Role of highly conserved aspartic acid residues in the G protein β subunit and Sec13. *J. Biol. Chem.* 273: 9041-9049.
5. Smith, T.F., et al. 1999. The WD repeat: a common architecture for diverse functions. *Trends Biochem. Sci.* 24: 181-185.
6. Li, D., et al. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. *Cell. Mol. Life Sci.* 58: 2085-2097.
7. Jin, J., et al. 2006. A family of diverse Cul4-Ddb1-interacting proteins includes Cdt2, which is required for S phase destruction of the replication factor Cdt1. *Mol. Cell* 23: 709-721.
8. Angers, S., et al. 2006. Molecular architecture and assembly of the DDB1-CUL4A ubiquitin ligase machinery. *Nature* 443: 590-593.
9. Sowa, M.E., et al. 2009. Defining the human deubiquitinating enzyme interaction landscape. *Cell* 138: 389-403.

CHROMOSOMAL LOCATION

Genetic locus: DCAF4 (human) mapping to 14q24.2; Dcaf4 (mouse) mapping to 12 D1.

SOURCE

WDR21A (G-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of WDR21A of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 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-139107 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WDR21A (G-12) is recommended for detection of WDR21A isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with WDR21B or WDR21C.

WDR21A (G-12) is also recommended for detection of WDR21A isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for WDR21A siRNA (h): sc-92429, WDR21A shRNA Plasmid (h): sc-92429-SH and WDR21A shRNA (h) Lentiviral Particles: sc-92429-V.

Molecular Weight of WDR21A: 56 kDa.

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) 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.

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.