

WDR12 (P-15): sc-132875

BACKGROUND

WD repeat containing protein 12 (WDR12), also known as YTM1 homolog, is a 423 amino acid protein that localizes to the nucleus. 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. WDR12, which contains seven WD-repeats, has been characterized to form a stable complex with pescadillo and BOP1. This complex, named PeBoW, plays a critical role in the mammalian ribosome biogenesis pathway. A mutation in the gene encoding WDR12 leads to an inhibition of ribosomal RNA (rRNA) processing and triggers p53-dependent cell cycle arrest. Pescadillo, BOP1 and WDR12 expression has been shown to be upregulated by the oncogenic transcription factor c-Myc.

REFERENCES

1. Di Benedetto, A.J., et al. 2001. Cloning and molecular characterization of a novel gene encoding a WD-repeat protein expressed in restricted areas of adult rat brain. *Gene* 271: 21-31.
2. Nal, B., et al. 2002. Wdr12, a mouse gene encoding a novel WD-repeat protein with a notchless-like amino-terminal domain. *Genomics* 79: 77-86.
3. Holzel, M., et al. 2005. Mammalian WDR12 is a novel member of the Pes1-BOP1 complex and is required for ribosome biogenesis and cell proliferation. *J. Cell Biol.* 170: 367-378.
4. Miles, T.D., et al. 2005. Ytm1, Nop7, and Erb1 form a complex necessary for maturation of yeast 66S preribosomes. *Mol. Cell. Biol.* 25: 10419-10432.
5. Grimm, T., et al. 2006. Dominant-negative Pes1 mutants inhibit ribosomal RNA processing and cell proliferation via incorporation into the PeBoW-complex. *Nucleic Acids Res.* 34: 3030-3043.

CHROMOSOMAL LOCATION

Genetic locus: WDR12 (human) mapping to 2q33.2; Wdr12 (mouse) mapping to 1 C2.

SOURCE

WDR12 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of WDR12 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-132875 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

WDR12 (P-15) is recommended for detection of WDR12 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 other WDR family members.

WDR12 (P-15) is also recommended for detection of WDR12 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WDR12 siRNA (h): sc-94873, WDR12 siRNA (m): sc-155257, WDR12 shRNA Plasmid (h): sc-94873-SH, WDR12 shRNA Plasmid (m): sc-155257-SH, WDR12 shRNA (h) Lentiviral Particles: sc-94873-V and WDR12 shRNA (m) Lentiviral Particles: sc-155257-V.

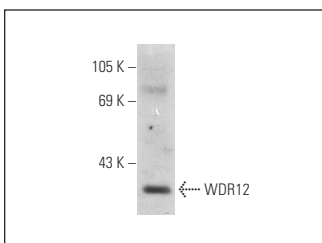
Molecular Weight of WDR12: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



WDR12 (P-15): sc-132875. Western blot analysis of WDR12 expression in HeLa 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.