

YTHDC2 (G-19): sc-249370

BACKGROUND

YTHDC2 (YTH domain containing 2), also known as probable ATP-dependent RNA helicase YTHDC2, is a 1,430 amino acid protein. Belonging to the DEAD box helicase family and DEAH subfamily, YTHDC2 contains two ANK repeats, a helicase ATP-binding domain, helicase C-terminal domain, R3H domain and a YTH domain, a potential RNA binding domain. The gene encoding YTHDC2 maps to human chromosome 5q22.2 and mouse chromosome 18 B3. With 181 million base pairs encoding around 1,000 genes, chromosome 5 make up approximately 6% of human genomic DNA. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5 associated and is caused by insertions or deletions within the TCOF1 gene.

REFERENCES

1. Edwards, S.J., et al. 1997. The mutational spectrum in Treacher Collins syndrome reveals a predominance of mutations that create a premature-termination codon. *Am. J. Hum. Genet.* 60: 515-524.
2. McDaniel, L.D., et al. 1997. Confirmation of homozygosity for a single nucleotide substitution mutation in a Cockayne syndrome patient using monoallelic mutation analysis in somatic cell hybrids. *Hum. Mutat.* 10: 317-321.
3. Schmutz, J., et al. 2004. The DNA sequence and comparative analysis of human chromosome 5. *Nature* 431: 268-274.
4. Finch, R., et al. 2005. Familial adenomatous polyposis and mental retardation caused by a *de novo* chromosomal deletion at 5q15-q22: report of a case. *Dis. Colon Rectum.* 48: 2148-2152.
5. Anindya, R., et al. 2007. Damage-induced ubiquitylation of human RNA polymerase II by the ubiquitin ligase Nedd4, but not Cockayne syndrome proteins or BRCA1. *Mol. Cell.* 28: 386-397.
6. Tsai, Y.C., et al. 2012. Functional proteomics establishes the interaction of SIRT7 with chromatin remodeling complexes and expands its role in regulation of RNA polymerase I transcription. *Mol. Cell. Proteomics* 11: 60-76.

CHROMOSOMAL LOCATION

Genetic locus: YTHDC2 (human) mapping to 5q22.2; Ythdc2 (mouse) mapping to 18 B3.

SOURCE

YTHDC2 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of YTHDC2 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-249370 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

YTHDC2 (G-19) is recommended for detection of YTHDC2 of mouse, rat and 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 YTHDC1.

YTHDC2 (G-19) is also recommended for detection of YTHDC2 in additional species, including bovine.

Suitable for use as control antibody for YTHDC2 siRNA (h): sc-91804, YTHDC2 siRNA (m): sc-155422, YTHDC2 shRNA Plasmid (h): sc-91804-SH, YTHDC2 shRNA Plasmid (m): sc-155422-SH, YTHDC2 shRNA (h) Lentiviral Particles: sc-91804-V and YTHDC2 shRNA (m) Lentiviral Particles: sc-155422-V.

Molecular Weight of YTHDC2: 160 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.