

C1orf57 (C-19): sc-245662

BACKGROUND

Belonging to the THEP1 NTPase family, C1orf57 (also known as nucleoside triphosphate phosphohydrolase), and its mouse homolog, 2310079N02Rik, are 190 amino acid proteins that has nucleotide phosphatase activity towards ATP, GTP, TTP, CTP and UTP. Acting as a monomer, it also hydrolyzes nucleoside diphosphates with lower efficiency. The gene encoding C1orf57 maps to human chromosome 1, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
5. Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.
6. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.

CHROMOSOMAL LOCATION

Genetic locus: NTPCR (human) mapping to 1q42.2; Ntpcr (mouse) mapping to 8 E2.

SOURCE

C1orf57 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of C1orf57 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-245662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C1orf57 (C-19) is recommended for detection of C1orf57 of human origin and 2310079N02Rik of mouse 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).

C1orf57 (C-19) is also recommended for detection of C1orf57 of human origin and 2310079N02Rik of mouse origin in additional species, including equine and bovine.

Suitable for use as control antibody for C1orf57 siRNA (h): sc-88737, 2310079N02Rik siRNA (m): sc-108725, C1orf57 shRNA Plasmid (h): sc-88737-SH, 2310079N02Rik shRNA Plasmid (m): sc-108725-SH, C1orf57 shRNA (h) Lentiviral Particles: sc-88737-V and 2310079N02Rik shRNA (m) Lentiviral Particles: sc-108725-V.

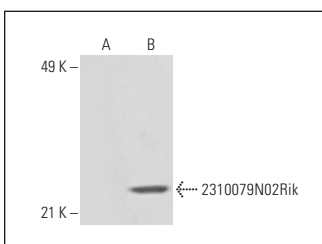
Molecular Weight of C1orf57: 21 kDa.

Positive Controls: 2310079N02Rik (m): 293T Lysate: sc-117919.

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



C1orf57 (C-19): sc-245662. Western blot analysis of 2310079N02Rik expression in non-transfected: sc-117752 (A) and mouse 2310079N02Rik transfected: sc-117919 (B) 293T whole cell lysates.

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.