

ZZZ3 (K-16): sc-137964

BACKGROUND

ZZZ3 (ZZ-type zinc finger-containing protein 3) is a 903 amino acid protein that contains one HTH myb-type DNA-binding domain and one ZZ-type zinc finger. Phosphorylated upon DNA damage by ATM or ATR, ZZZ3 is a subunit of the ATAC complex, which is composed of GCN5, CRP2BP, ADA3, TADA2L, DR1, CCDC101, YEATS2, WDR5 and MBIP. The ATAC complex has histone acetyltransferase activity on histones H3 and H4. ZZZ3 is expressed as four isoforms produced by alternative splicing and is encoded by a gene mapping to human chromosome 1. Chromosome 1 is 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. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

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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. Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
6. Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC-1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
7. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.

CHROMOSOMAL LOCATION

Genetic locus: ZZZ3 (human) mapping to 1p31.1; Zzz3 (mouse) mapping to 3 H3.

SOURCE

ZZZ3 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZZZ3 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 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-137964 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-137964 X, 200 µg/0.1 ml.

APPLICATIONS

ZZZ3 (K-16) is recommended for detection of ZZZ3 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).

ZZZ3 (K-16) is also recommended for detection of ZZZ3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ZZZ3 siRNA (h): sc-88825, ZZZ3 siRNA (m): sc-155857, ZZZ3 shRNA Plasmid (h): sc-88825-SH, ZZZ3 shRNA Plasmid (m): sc-155857-SH, ZZZ3 shRNA (h) Lentiviral Particles: sc-88825-V and ZZZ3 shRNA (m) Lentiviral Particles: sc-155857-V.

ZZZ3 (K-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ZZZ3: 102 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.

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.