SANTA CRUZ BIOTECHNOLOGY, INC.

PUS3 (E-14): sc-138560

BACKGROUND

PUS3 (pseudouridylate synthase 3) is a 481 amino acid protein that belongs to the tRNA pseudouridine synthase truA family. Localizing to nucleus, PUS3 is involved with the formation of pseudouridine at position 39 in the anticodon stem and loop of transfer RNAs. The PUS3 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans, S. pombe, S. cerevisiae, K. lactis, E. gossypii, A. thaliana,* rice and *P. falciparum,* and maps to human chromosome 11q24.2. With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. The chromosome 11 encoded Atm gene is important for regulation of cell cycle arrest and apoptosis following double strand DNA breaks. Atm mutation leads to the disorder known as ataxia-telangiectasia. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11.

REFERENCES

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3. Grossfeld, P.D., et al. 2004. The 11q terminal deletion disorder: a prospective study of 110 cases. Am. J. Med. Genet. A 129A: 51-61.
4. Zehelein, J., et al. 2006. Skipping of Exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. J. Biol. Chem. 281: 35397-35403.
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7. Berger, A.C., et al. 2007. The subcellular localization of the Niemann-Pick Type C proteins depends on the adaptor complex AP-3. J. Cell Sci. 120: 3640-3652.
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CHROMOSOMAL LOCATION

Genetic locus: PUS3 (human) mapping to 11q24.2; Pus3 (mouse) mapping to 9 A4.

SOURCE

PUS3 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PUS3 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-138560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PUS3 (E-14) is recommended for detection of PUS3 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 other PUS family members.

PUS3 (E-14) is also recommended for detection of PUS3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PUS3 siRNA (h): sc-96289, PUS3 siRNA (m): sc-152593, PUS3 shRNA Plasmid (h): sc-96289-SH, PUS3 shRNA Plasmid (m): sc-152593-SH, PUS3 shRNA (h) Lentiviral Particles: sc-96289-V and PUS3 shRNA (m) Lentiviral Particles: sc-152593-V.

Molecular Weight of PUS3: 56 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.