SANTA CRUZ BIOTECHNOLOGY, INC.

Asf1 (yG-12): sc-34035

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CIA, an interactor of the CCG1 histone acetyltransferase subunit of TFIID, is a human histone chaperone. The *Saccharomyces cerevisiae* orthologue Asf1 (anti-silencing function 1) is involved in DNA repair response. Asf1, when over-expressed, causes de-repression of silent loci. Asf1 (also known as Asf1p) interacts with Bdf1p (bromodomain factor 1), which serves as the missing bromodomain in yTAF(II)145. Cell death in *S. cerevisiae* occurs with a phenotype that largely resembles apoptosis in multicellular organisms, but also has some features of passive cell death (necrosis). Deletion of Asf1 inhibits the normal assembly/disassembly of nucleosomes in yeast and thereby initiates the active cell death system. Yeast CAF-I and Asf1 cooperate to form nucleosomes *in vitro*. *In vivo*, Asf1 and Hir proteins physically interact and together promote heterochromatic gene silencing in a manner requiring PCNA. Chromatin assembly factor I mutants defective for PCNA binding require Asf1/Hir proteins for silencing.

REFERENCES

1. Yamaki, M., et al. 2001. Cell death with predominant apoptotic features in *Saccharomyces cerevisiae* mediated by deletion of the histone chaperone Asf1/CIA1. Genes Cells 6: 1043-1054.
2. Sharp, J.A., et al. 2001. Yeast histone deposition protein Asf1p requires Hir proteins and PCNA for heterochromatic silencing. Curr. Biol. 11: 463-473.
3. Umehara, T., et al. 2002. Polyanionic stretch-deleted histone chaperone CIA1/Asf1p is functional both *in vivo* and *in vitro*. Genes Cells 7: 59-73.
4. Mello, J.A., et al. 2002. Human Asf1 and CAF-1 interact and synergize in a repair-coupled nucleosome assembly pathway. EMBO Rep. 3: 329-334.
5. Chimura, T., et al. 2002. Identification and characterization of CIA/Asf1 as an interactor of bromodomains associated with TFIID. Proc. Natl. Acad. Sci. USA 99: 9334-9339.
6. Krawitz, D.C., et al. 2002. Chromatin assembly factor I mutants defective for PCNA binding require Asf1/Hir proteins for silencing. Mol. Cell. Biol. 22: 614-625.

SOURCE

Asf1 (yG-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Asf1 of *Saccharomyces cerevisiae* 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-34035 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

Asf1 (yG-12) is recommended for detection of Asf1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Asf1: 31 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.

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.