SANTA CRUZ BIOTECHNOLOGY, INC.

ASPP1 (N-13): sc-50892

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ASPP proteins interact with p53 and are responsible for enhancing p53-induced apoptosis but not cell cycle arrest. Inhibition of endogenous ASPP1 (PPP1R13B) function inhibits the apoptotic function of endogenous p53 in response to apoptotic stimuli. ASPP1 amplifies DNA binding and transactivation function of p53 on the promoters of proapoptotic genes *in vivo*. Expression of ASPP1 is often downregulated in human breast carcinomas expressing wildtype p53, but not in those expressing mutant p53. This research indicates that ASPP1 regulates the tumor suppression function of p53 *in vivo*. ASPP1 is predominantly a cytoplasmic protein, although some fraction of the polypeptide is nuclear. Defects in PPP1R13B, the gene which encodes ASPP1, may be a cause of breast cancers. The deduced ASPP1 protein contains 1,090 amino acid residues.

REFERENCES

1. Nagase, T., Ishikawa, K., Suyama, M., Kikuno, R., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1999. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
2. Samuels-Lev, Y., O'Connor, D.J., Bergamaschi, D., Trigiante, G., Hsieh, J.K., Zhong, S., Campargue, I., Naumovski, L., Crook, T. and Lu, X. 2001. ASPP proteins specifically stimulate the apoptotic function of p53. Mol. Cell 8: 781-794.
3. Bergamaschi, D., Samuels, Y., Jin, B., Duraisingham, S., Crook, T. and Lu, X. 2004. ASPP1 and ASPP2: common activators of p53 family members. Mol. Cell. Biol. 24: 1341-1350.
4. Bergamaschi, D., Samuels, Y., Zhong, S. and Lu, X. 2005. MDM2 and MDMX prevent ASPP1 and ASPP2 from stimulating p53 without targeting p53 for degradation. Oncogene 24: 3836-3841.
5. Fogal, V., Kartasheva, N.N., Trigiante, G., Llanos, S., Yap, D., Vousden, K.H. and Lu, X. 2005. ASPP1 and ASPP2 are new transcriptional targets of E2F. Cell Death Differ. 12: 369-376.
6. Agirre, X., Román-Gómez, J., Jimenez-Velasco, A., Garate, L., Montiel-Duarte, C., Navarro, G., Vázquez, I., Zalacain, M., Calasanz, M.J., Heiniger, A., Torres, A., Minna, J.D. and Prósper, F. 2006. ASPP1, a common activator of TP53, is inactivated by aberrant methylation of its promoter in acute lymphoblastic leukemia. Oncogene 25: 1862-1870.
7. Thornton, J.K., Dalgleish, C., Venables, J.P., Sergeant, K.A., Ehrmann, I.E., Lu, X., Saunders, P.T. and Elliott, D.J. 2006. The tumour-suppressor protein ASPP1 is nuclear in human germ cells and can modulate ratios of CD44 exon V5 spliced isoforms *in vivo*. Oncogene 25: 3104-3012.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R13B (human) mapping to 14q32.33; Ppp1r13b (mouse) mapping to 12 F2.

SOURCE

ASPP1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ASPP1 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-50892 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ASPP1 (N-13) is recommended for detection of ASPP1 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).

ASPP1 (N-13) is also recommended for detection of ASPP1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ASPP1 siRNA (h): sc-60214, ASPP1 siRNA (m): sc-60215, ASPP1 shRNA Plasmid (h): sc-60214-SH, ASPP1 shRNA Plasmid (m): sc-60215-SH, ASPP1 shRNA (h) Lentiviral Particles: sc-60214-V and ASPP1 shRNA (m) Lentiviral Particles: sc-60215-V.

Molecular Weight of ASPP1: 119 kDa.

Positive Controls: Saos-2 cell lysate: sc-2235.

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.

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.