



p53AIP1 (N-15): sc-14094

BACKGROUND

p53 is a tumor suppressor gene or anti-oncogene that has been shown to induce apoptosis by means of a direct signaling pathway. For example, when severe DNA damage or a mutation occurs, ser-46 on p53 is phosphorylated, p53AIP1 (p53-regulated Apoptosis-Inducing Protein 1) is expressed and apoptosis is induced. However, when ser-46 is substituted, the expression of p53AIP1 is blocked, and apoptosis is inhibited. Expression of p53AIP1 is strictly controlled by p53 under specific conditions and is inducible by p53. The expression of p53AIP1 causes apoptosis in some, but not all p53-mutated cancer cells. p53AIP1 is ectopically expressed within the mitochondria in a wide variety of tissue types, excluding the thymus. Overexpression of the p53AIP1 gene causes dissipation of mitochondrial membrane potential which further suggests a key role for p53AIP1 in the regulation of apoptosis.

REFERENCES

1. Lane, D.P., et al 1990. p53: oncogene or anti-oncogene? *Genes Dev.* 4: 1-8.
2. Levine, A.J. 1997. p53, the cellular gatekeeper for growth and division. *Cell* 88: 323-331.
3. Giaccia, A.J., et al. 1998. The complexity of p53 modulation: emerging patterns from divergent signals. *Genes Dev.* 12: 2973-2983.
4. Li, P.F., et al. 1999. p53 regulates mitochondrial membrane potential through reactive oxygen species and induces cytochrome c-independent apoptosis blocked by Bcl-2. *EMBO J.* 18: 6027-6036.
5. Oda, K., et al. 2000. p53AIP1, a potential mediator of p53-dependent apoptosis, and its regulation by ser-46-phosphorylated p53. *Cell* 102: 849-862.
6. Matsuda, K., et al. 2002. p53AIP1 regulates the mitochondrial apoptotic pathway. *Cancer Res* 62: 2883-2889. PMID 12019168.

SOURCE

p53AIP1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of p53AIP1 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-14094 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

p53AIP1 (N-15) is recommended for detection of p53AIP1 of 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).

Suitable for use as control antibody for p53AIP1 siRNA (h): sc-37459.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.