

## PA26-T3 (N-20): sc-9507

### BACKGROUND

Cell cycle progression is subject to arrest at G<sub>1</sub> and G<sub>2</sub> checkpoints in response to DNA damage, presumably to allow time for DNA repair prior to entry into S and M phase, respectively. The p53 tumor suppressor is required for one such G<sub>1</sub> checkpoint and functions to upregulate expression of GADD 45 and the mitotic inhibitory protein p21. GADD 45 stimulates DNA excision repair *in vitro* and inhibits entry of cells into S phase, and it apparently acts in concert with GADD 153 in inducing growth arrest. A related DNA-damage inducible gene, GADD 34 synergizes with GADD 45 or GADD 153 in suppressing cell growth. PEG-3 (progression elevated gene-3) shares significant homology with GADD 34 and is inducible by DNA damage. An additional GADD related gene, PA26, is a possible target of p53. Three isoforms of PA26 have been identified as PA26-T1, PA26-T2 and PA26-T3.

### REFERENCES

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2. Hunter, T. et al. 1994. Cyclins and cancer II: cyclin D and CDK inhibitors come of age. *Cell* 79: 573-582.
3. Smith, M.L., et al. 1994. Interaction of the p53-regulated protein GADD 45 with proliferating cell nuclear antigen. *Science* 266: 1376-1380.
4. Gujuluva, C.N., et al. 1994. Effect of UV-irradiation on cell cycle, viability and the expression of p53, gadd153 and gadd45 genes in normal and HPV-immortalized human oral keratinocytes. *Oncogene* 9: 1819-1827.
5. Selvakumaran, M., et al. 1994. The novel primary response gene MyD118 and the proto-oncogenes myb, myc, and bcl-2 modulate transforming growth factor  $\beta$ 1-induced apoptosis of myeloid leukemia cells. *Mol. Cell. Biol.* 14: 2352-2360.
6. Zhan, Q., et al. 1994. The gadd and MyD genes define a novel set of mammalian genes encoding acidic proteins that synergistically suppress cell growth. *Mol. Cell. Biol.* 14: 2361-2371.
7. Su, Z.Z., et al. 1997. Subtraction hybridization identifies a transformation progression associated-gene PEG-3 with sequence homology to a growth arrest and DNA damage-inducible gene. *Proc. Natl. Acad. Sci. USA* 94: 9125-9130.
8. Velasco-Miguel, S., et al. 1999. PA26, a novel target of the p53 tumor suppressor and member of the GADD family of DNA damage and growth arrest inducible genes. *Oncogene* 18: 127-137.

### CHROMOSOMAL LOCATION

Genetic locus: SESN1 (human) mapping to 6q21; Sesn1 (mouse) mapping to 10 B2.

### SOURCE

PA26-T3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PA26-T3 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9507 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PA26-T3 (N-20) is recommended for detection of all PA26-T isoforms of human and, to a lesser extent, mouse and rat 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).

PA26-T3 (N-20) is also recommended for detection of all PA26-T isoforms in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PA26 siRNA (h): sc-37420, siRNA (m): sc-37421, PA26 shRNA Plasmid (h): sc-37420-SH, PA26 shRNA Plasmid (m): sc-37421-SH, PA26 shRNA (h) Lentiviral Particles: sc-37420-V and Lentiviral Particles: sc-37420-V.

Molecular Weight of PA26-T3: 57 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **PA26 (C-10): sc-376170**, our highly recommended monoclonal alternative to PA26-T3 (N-20).