# PA26 (m): 293T Lysate: sc-122341



The Power to Question

## **BACKGROUND**

Cell cycle progression is subject to arrest at  $G_1$  and  $G_2$  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  $G_1$  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 supressing 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**

- Hunter, T. et al. 1994. Cyclins and cancer II: cyclin D and CDK inhibitors come of age. Cell 79: 573-582.
- 2. Sherr, C.J. 1994. G<sub>1</sub> phase progression: cycling on cue. Cell 79: 551-555.
- 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, GADD 153 and GADD 45 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.
- 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 (mouse) mapping to 10 B2.

#### **PRODUCT**

PA26 (m): 293T Lysate represents a lysate of mouse PA26 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

# **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

PA26 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PA26 antibodies. Recommended use: 10-20 µl per lane.

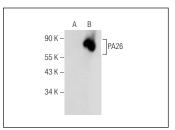
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PA26 (C-10): sc-376170 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PA26 expression in PA26 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### DATA



PA26 (C-10): sc-376170. Western blot analysis of PA26 expression in non-transfected: sc-117752 (**A**) and mouse PA26 transfected: sc-122341 (**B**) 293T whole

### **RESEARCH USE**

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

## **PROTOCOLS**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com