IBRDC2 (m): 293T Lysate: sc-120934



The Power to Question

BACKGROUND

p53 is the most commonly mutated gene in human cancer identified to date. Expression of p53 leads to inhibition of cell growth by preventing progression of cells from G_1 to S phase of the cell cycle. Most importantly, p53 functions to cause arrest of cells in the G_1 phase of the cell cycle following any exposure of cells to DNA-damaging agents. The MDM2 (murine double minute-2) protein was initially identified as an oncogene in a murine transformation system. MDM2 functions to bind p53 and block p53-mediated transactivation of cotransfected reporter constructs. The MDM2 gene is amplified in a high percentage of human sarcomas that retain wildtype p53 and tumor cells that overexpress MDM2 can tolerate high levels of p53 expression. Another p53 target protein is the p53-inducible RING finger protein (p53RFP), an auto-ubiquitinylated protein acting as an E3 ubiquitin ligase. p53RFP receives ubiquitin from specific E2 ubiquitin-conjugating enzymes and transfers it to substrates that promote their degradation by the proteasome. p53RFP may mediate re-entry into the cell cycle.

REFERENCES

- 1. Vogelstein, B. 1990. Cancer. A deadly inheritance. Nature 348: 681-682.
- Hollstein, M., et al. 1991. p53 mutations in human cancers. Science 253: 49-53.
- 3. Kastan, M.B., et al. 1991. Participation of p53 protein in the cellular response to DNA damage. Cancer Res. 51: 6304-6311.
- Fakharzadeh, S.S., et al. 1991. Tumorigenic potential associated with enhanced expression of a gene that is amplified in a mouse tumor cell line. EMBO J. 10: 1565-1569.
- Oliner, J.D., et al. 1993. Oncoprotein MDM2 conceals the activation domain of tumour suppressor p53. Nature 362: 857-860.
- Chen, C.Y., et al. 1994. Interactions between p53 and MDM2 in a mammalian cell cycle checkpoint pathway. Proc. Natl. Acad. Sci. USA 91: 2684-2688.
- 7. Ng, C.C., et al. 2003. p53RFP, a p53-inducible RING-finger protein, regulates the stability of p21WAF1. Oncogene 22: 4449-4458.
- 8. Nakamura, Y., et al. 2004. Isolation of p53-target genes and their functional analysis. Cancer Sci. 95: 7-11.
- 9. SWISS-PROT/TrEMBL (Q7Z419). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Rnf144b (mouse) mapping to 13 A5.

PRODUCT

IBRDC2 (m): 293T Lysate represents a lysate of mouse IBRDC2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

IBRDC2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive IBRDC2 antibodies. Recommended use: $10-20~\mu$ l per lane.

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

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.

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