

Anti-p53 Phospho-Ser46 antibody, monoclonal (#36)

71-115

50  $\mu$ g

*p53* mutants are found in more than half of human cancers and are considered as the most important human cancer related gene. *p53* is detected at 53kD position by electrophoresis and is composed of 393 amino acids. In the unstressed normal cells the *p53* level is low and it is inactive. However, with stress, especially with DNA damage, it is activated to promote arrest of cell cycle and repair of DNA damage, or induction of apoptosis. The functions of *p53* are regulated by the phosphorylation of serine and threonine, and the acetylation of lysine at various sites in the molecule. Among the phosphorylation sites, Ser46 is phosphorylated when DNA damage is so severe as to become unrepairable, which leads to apoptosis by activating the transcription of proapoptotic genes such as *p53AIP1* (ref 1, 2). As to the kinase of the phosphorylation of Ser46, the involvement of DYRK2 is implicated (ref 3).

This product is the purified IgG fraction obtained from serum free culture of mouse hybridoma (clone #36) which produces monoclonal antibody that specifically recognizes *p53* protein with phosphorylated Ser46 (ref 3).

#### Application

- 1) Western blotting (x1,000~2,000 dilution, Fig.1)      2) ELISA
- 3) Immuno-precipitation and indirect immuno-staining of cells have not been tested.

#### Specification

Antigen: synthetic peptide containing phospho-Ser46 of *p53*

Isotype: mouse IgG1 ( $\kappa$ )

Form: Purified monoclonal antibody (IgG) 1mg/ml in PBS, 50% glycerol

Reaction: Human *p53*-phospho-Ser46. Nonspecific background reaction is low (Fig.1)

Storage: -20 °C (long period, -70°C)

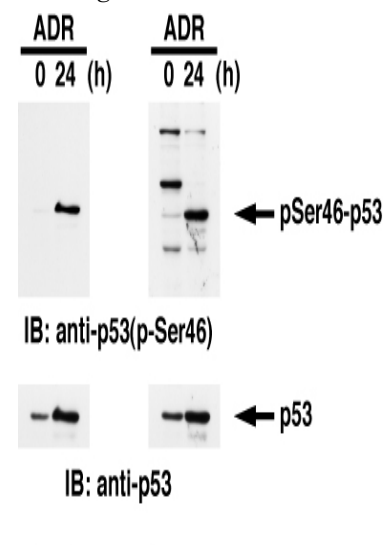
**References:** This product was used in reference 3.

1. Bode AM & Dong Z. Nature Rev. Cancer 4: 793 (2004)
2. Oda K et al. Cell, 102: 849-862 (2000)
3. Taira N. et al. Mol. Cell, 25:725-738 (2007)

#### Fig.1 Identification of *p53* protein whose Ser46 is phosphorylated

by Western blotting. Samples: Crude cell extracts of MOLT-4 untreated

(left lanes) and treated with adriamycin for 24 h (right lanes). The left panel is the result with our product and right panel is the one obtained with the product of our competitor. The lower panel is whole *p53* protein identified by omnipotent anti-*p53* antibody.



<Distributed by>: SCETI K.K. DF Kasumigaseki Place, 3-6-7 Kasumigaseki, Chiyoda-ku Tokyo 100-0013 JAPAN Tel: +81-3-5510-2347 Fax: +81-3-5510-0134  
E-mail: [exp-pet@sceti.co.jp](mailto:exp-pet@sceti.co.jp) URL: [www.sceti.co.jp/export/](http://www.sceti.co.jp/export/)

<Manufactured by>: BioAcademia, Inc. 7-7-18 Saito-Asagi, Ibaraki, Osaka 567-0085, JAPAN