



## HISTOPRIME<sup>®</sup>

**CatNo E052**

### p53

Lot: See Label

Storage: +2 to +8 °C

Exp. Date: See Label

### Monoclonal Antibody against p53 oncoprotein

#### Specificity

The p53 tumor suppressor gene is one of the most frequently altered genes in malignant tumors of human tissues. P53 is a transcription factor that regulates cell growth and prevents cells from entering the S phase of mitosis. The p53 oncoprotein is expressed at very low levels in normal cells. However, common point mutations on chromosome 17 can lead to accumulation of the mutant phosphoprotein. The expression product of the mutant gene no longer has binding ability for DNA and thus no suppressor activity.

The p53 protein is expressed in a large number of different carcinomas. For colorectal carcinomas with a high expression rate, a study on formaldehyde-fixed material after treatment with "Target Unmasking Fluid" showed a sensitivity of 67% and a specificity of 90% for immunohistochemical detection with clone DO-7 (corresponding to E052) (Baas et al., 1994).

#### Contents

Reagents sufficient for about 50-100 tissue sections  
1 dropper bottle **HISTOPRIME<sup>®</sup> p53** (Bottle, 5 ml)

#### Application

The monoclonal antibody E052 recognizes the N-terminus of the human p53 protein. It reacts with both the normal and mutant forms of the protein. The antibody can be used on cryostat material and formaldehyde-fixed paraffin material.  
For paraffin sections, pretreatment with pronase is necessary, but this can advantageously be replaced by unmasking with HistoSafe Enhancer Unmasking Solution (LINARIS CatNo E7000).

#### Fusion Partners

The monoclonal antibody was obtained from culture supernatant of mouse hybridoma cells.

E052-230109-1/2





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### Characterization

<b>Antigen</b>	p53 phosphoprotein
<b>Specificity</b>	N-terminus of the p53 protein
<b>Clone</b>	DO-7
<b>Isotype</b>	Mouse IgG2b
<b>Pretreatment</b>	Enzymatic pretreatment with 0.1% Pronase (LINARIS CatNo E110) for 10 minutes at room temperature. Better results can be achieved by pretreatment HistoSafe Enhancer Unmasking Solution (LINARIS CatNo E7000) 10 minutes at 96°C (water bath), 100°C (pressure cooker) or 2 x 5 minutes in temperature-controlled microwave.
<b>Incubation Period</b>	1 hour by room temperature
<b>Control Tissue</b>	Breast Cancer
<b>Application</b>	Ready-to-use in PBS, BSA, NaN <sub>3</sub> (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
<b>Recommended Secondary Reagents</b>	<b>Alkaline Phosphatase</b> Vectastain <sup>®</sup> ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector <sup>®</sup> Red (Vector CatNo SK-5100). <b>Peroxidase</b> Vectastain <sup>®</sup> ABC-Elite Mouse IgG (Vector CatNo PK-6102) and Peroxidase Substrate-Kit e.g. DAB (LINARIS CatNo E108) or HistoGreen (LINARIS CatNo E109).

### References

1. Cattoretti G., Rilke F., Andreola S., D'Amato L., and Delia D. p53 expression in breast cancer. *Int. J. Cancer* 41: 178-183 (1988)
2. Nigro M. J., Baker S. J., Preisinger A. C., Jessup J. M., Hostetter R., et al. Mutations in the p53 gene occur in diverse human tumour types. *Nature* 342: 705-708 (1989)
3. Van den Berg F. M., Tigges A. J., Schipper M. E. I., Den Hartog-Jager F. C. A., Kroes W. G. M., Walboomers J. M. M. Expression of the nuclear oncogene p53 in colon tumours. *Clin. Pathol.* 157: 193-199 (1989)
4. Iggo R., Gatter K., Bartek J., Lane D., Harris A. L., Increased expression of mutant forms of p53 oncogene in lung cancer. *Lancet* 335: 675-679 (1990)
5. Bartek J., Bartkova J., Voitesek B., Staskova Z., Lukas J., Rejthar A., et al. Aberrant expression of the p53 oncoprotein is a common feature of a wide spectrum of human malignancies. *Oncogene* 6: 1699-1703 (1991)
6. Baas, I. O., Mulder J-W. R., Johan G., Offerhaus A., Vogelstein B., and Hamilton S. R. An evaluation of six antibodies for immunocytochemistry of mutant p53 gene product in archival colorectal neoplasms. *J. Pathol.* 172: 5-12 (1994)

**Differential identification is aided by the results from a panel of antibodies. Interpretation must be made within the context of the patient's clinical history and other diagnostics tests by a qualified pathologist.**

**(\*)Note E052 contains Sodium Azide; take adequate precautions!**

E052-230109-2/2

**For Research use only. Not for use in diagnostic procedure**

Manufacturer

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FIT FOR SCIENCE

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