

## HISTOPRIME<sup>®</sup>

**CatNo E061**

## Cytokeratin 7

Lot: See Label

Storage: +2 to +8 °C

Exp. Date: See Label

## Monoclonal Antibody against Cytokeratin 7

### Specificity

Part of the cytoskeleton of epithelia and cells derived from them consists of cytokeratins. These interrelated polypeptides are divided into two groups, acidic and basic peptides. To date, 20 cytokeratins have been characterized in more detail and their expression in different cell types has been studied. The molecular weights range from 40 to 69 kD. Each epithelial tissue shows a specific and stable expression pattern of cytokeratins.

A nomenclature of cytokeratins used for immunohistochemical studies was outlined by Moll et al. (1982). Cytokeratin 20 was discovered and characterized at a later time (Moll et al. 1990 and 1992). In the differential diagnosis of carcinomas of the abdomen, cytokeratin 7 and cytokeratin 20 are highly complementary.

### Contents

Reagents sufficient for about 50-100 tissue sections  
1 dropper bottle **HISTOPRIME<sup>®</sup> Cytokeratin 7** (Bottle, 5 ml)

### Normal Tissues

The monoclonal antibody E061 reacts with cytokeratin 7 in numerous epithelia of glands and glandular ducts including bile ducts and transistORIZED epithelia of the urinary tract. Most notably, epithelia of the lung and breast are visualized with this antibody. The antibody does not react with prostate epithelia, colonic epithelia, squamous epithelia, hepatocytes and other non-epithelial cells. Of course, it also does not react with other cytoskeletal proteins.

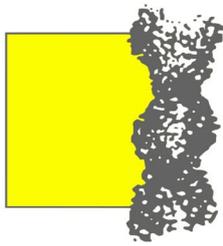
### Abnormal Tissues

Neoplasms that express CK-7 are derived from tissues that also normally produce CK-7. These include specific adenocarcinomas of the ovary, breast and lung, and transitional cell carcinoma. Gastrointestinal carcinomas and prostate carcinomas are usually negative, as are squamous cell carcinomas, making the antibody a relatively good marker for adenocarcinoma and transitional cell carcinoma (Ramaekers et al., 1990).

Small cell lung carcinoma (SCLC) and endocrine tumors of the intestinal tract and pancreas are also negative. With adenocarcinoma of the lung, breast, and non-mucinous carcinomas of the ovary negative.

E061-230109-1/2





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### Characterization

<b>Antigen</b>	Ovarian carcinoma cell line OTN 11 (Poels et al., 1989).
<b>Specificity</b>	Human cytokeratin 7, cross-reaction with animal cytokeratins not studied.
<b>Abnormal Tissues</b>	Differential diagnosis adenocarcinomas (lung, breast, ovary) and their metastases *.
<b>Clone</b>	OV-TL 12/30
<b>Isotype</b>	Mouse IgG1
<b>Pretreatment</b>	Pretreat deparaffinized sections with Pronase 0.1 % (LINARIS CatNo E110) for 10 minutes at RT or HistoSafe Enhancer Unmasking Solution (LINARIS CatNo E7000) for 10 minutes at 96-100°C.
<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. Moll R., Franke W. W., Schiller D. L. Geiger B., and Krepler R. The catalog of human cytokeratin polypeptides: Pattern of expressions of specific cytokeratins in normal epithelia, tumors and cultured cells. Cell 31; 11-24 (1982)
2. Poels I. G., Jap P H. K., Ramaekers F. C. S., Scheres J. M. J. C., Thomas C. M. G., Vooijs P. G. Characterization of a hormone-producing ovarian carcinoma cell line. Gynecologic Oncology 32; 203-2114 (1989)
3. Ramaekers F., van Niekerk C., Poels L., Schaafsma E., Huijsmans A., Robben H. Use of monoclonal antibodies to cytokeratin 7 in differential diagnosis of adenocarcinomas. Am. J. Pathol. 136; 641-655 (1990)
4. Moll R., Schiller D. L., Franke W. W. Identification of protein IT of the intestinal cytoskeleton as a Novel type I cytokeratin with unusual properties and expressions patterns. J. Cell Biol. 111; 567-580 (1990)
5. Moll R., Löwe A., Läufer J., and Franke W. W. Cytokeratin 20 in human carcinomas. A new histodiagnostic marker detected by monoclonal antibodies. Am. J. Pathol. 140; 427-447 (1992)
6. Van de Molenkraft F. J. J. M., van Niekerk C. C., Jap P. H. K., Poels L. G. OV-TL 12/30 (keratin 7 antibody) is a marker of glandular differentiation in lung cancer. Histopathology 22: 35-38 (1993)

**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) E061 contains Sodium Azide; take adequate precautions!**

E061-230109-2/2

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

Manufacturer

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FIT FOR SCIENCE

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