



HISTOPRIME[®]

CatNo E020

Cytokeratin Cocktail

Lot: See Label

Storage: +2 to +8 °C

Exp. Date: See Label

Monoclonal Antibody against human epithelial keratins

Specificity

A group of 19 different water-insoluble proteins forms the cytokeratins. Together with microtubules and microfilaments, they form the cytoskeleton of epithelial cells. Normally, it is the case that different cytokeratins are found simultaneously in one cell. This is independent of cell type, cell environment, disease and differentiation stage.

If a conversion from normal to neoplastic cells takes place, the expression of these proteins is maintained.

Contents

Reagents sufficient for about 50-100 tissue sections

1 dropper bottle **HISTOPRIME[®] Cytokeratin Cocktail** (Bottle, 5 ml)

Application

The antibody cocktail exhibits specific reaction with keratin-containing epithelial cells in tissue sections and cultures. It consists of three clones AE1, AE3 and KS 13.1 and demonstrates a broad spectrum of reaction including epidermis, mucosal epithelia, glandular epithelia, squamous epithelia of the ectocervix and urothelia.

The cocktail can be used to differentiate between carcinoma and non-carcinoma. E020 reacts specifically with cytokeratins 1-8, 10, 13-16 and 19.

Fusion Partners

Balb/c mice were immunized with human epithelial keratins and their spleen cells were fused with P3 myeloma cells. Furthermore, these spleen cells were tested for antikeratin activity by ELISA. Antibodies were purified by fractional salt precipitation.

E020-220109-1/2



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Characterization

Antigen	Human keratin
Specificity	Human epithelial cytokeratins
Cross-reactivity	Human, chicken, rabbit, mouse, rat, cattle:
Abnormal Tissues	Differentiation into carcinoma - non-carcinoma
Clone	AE1, AE3 and Ks13.2
Isotype	Mouse IgG1
Pretreatment	proteolytic pretreatment with 0.1% Pronase (LINARIS CatNo E110) 10 min at room temperature or HISTOPRIME-ENHANCER (LINARIS CatNo E7000) 10 min at 96-100°C in a water bath or in a microwave oven
Incubation Period	1 hour by room temperature
Control Tissue	Appendix or colon carcinoma
Application	Ready-to-use in PBS, BSA, NaN ₃ (0.09%) pH 7,4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
Recommended Secondary Reagents	Alkaline Phosphatase Vectastain [®] ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector [®] Red (Vector CatNo SK-5100). Peroxidase Vectastain [®] 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. Sun, T.-T and H.Green: Immunofluorescent staining of keratin fibers in cultured cells. Cell 14, 468 (1978)
2. Franke, W.W., E.Schmid, M.Osborn and K.Weber: Different intermediate-sized filaments distinguished by immunofluorescence microscopy. Proc. Natl. Acad. sci USA 75, 5034-5038 (1978)
3. Moll R., Franke W.W., Schiller D.L., Geiger B. and Krepler R.: The catalog of human cytokeratin polypeptides: Pattern of expression of specific cytokeratins in normal epithelia, tumors and cultured cells. Cell 31, 11-24 (1982)
4. Franke, W.W., O.Appelhans, E.Schmid, C.Freudenstein, M.Osborn and K.Weber: Identification and characterization of epithelial cells in mammalian tissues by immunofluorescence microscopy using antibodies to prekeratin. Differentiation 15, 7-25 (1979)
5. Sun, T.-T., R.Eichner, A.Schermer, D.Cooper, W.G.Nelson and R.A.Weiss: Classification expression and possible mechanisms of evolution of mammalian epithelial keratins: a unifying model. In: The Cancer Cell Vol.1, the transformed
6. Phenotype. A.Levine, W.Topp, G.Vande Woude and J.D.Watson, eds. Cold Spring Harbour Lab., N.Y. 169-176 (1984) Woodcock-Mitchell, J., R.Eichner, W.G.Nelson and T.-T.Sun: Immunolocalisation of keratin polypeptides in human epidermis using monoclonal antibodies. J. Cell. Biol. 95, 580-588 (1982)

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 E020 contains Sodium Azide; take adequate precautions!

E020-220109-2/2

For Research use only. Not for use in diagnostic procedure

Manufacturer

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FIT FOR SCIENCE

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Page 2 of 2

