



Mouse anti-Cytokeratin 5/14

Cat. No.: BMS023 (16 ml Ready-to-use)

Instructions for use

Intended use

This antibody cocktail is designed for the specific localisation of cytokeratins 5 and 14 in certain human epithelia in formalin-fixed, paraffin-embedded tissue sections. Anti-Cytokeratin 5/14 is intended for in vitro diagnostic use.

Specifications

Specificity:	Human Cytokeratin 5 and Cytokeratin 14
Immunogens:	Cytokeratin 5: recombinant protein according to the C-terminus of human CK5 Cytokeratin 14: synthetic peptide according to the C-terminus of human CK14
Clone:	XM26 (Cytokeratin 5) and LL002 (Cytokeratin 14)
Isotypes:	Mouse IgG1 (Cytokeratin 5) and mouse IgG3 (Cytokeratin 14)
Species reactivity:	human+, others not tested

Summary and description

Cytokeratins 5 and 14 are, like cytokeratin 6, very reliable markers for squamous cell epithelia. Using antibody cocktails against these cytokeratins is helpful for the detection of basal cell layers and myoepithelia. Their use is well established for differential diagnosis of atypical proliferations and DCIS of the breast (Böcker et al. 1997, Bánkfalvi et al. 2004).

Reagent provided

Mixture of mouse monoclonal antibodies in buffer with carrier protein and preservative for stabilisation in the formats:

Ready-to-use: 16 ml (Cat. No. BMS023)

Dilution of primary antibody

None

Storage and handling

The antibody cocktail should be stored at 2-8°C without further dilution.

If necessary, dilutions of the antibody should be done in a suitable antibody dilution buffer (e.g. ZUC025 from Zytomed Systems). The diluted antibody should be stored at 2-8°C after use. Stability of this working solution depends on various parameters and has to be confirmed by appropriate controls.

The antibody cocktail provided is suitable for use until the expiry date indicated on the label, if stored at 2-8°C. Do not use product after the expiry date. Positive and negative controls should be run simultaneously with all specimens. If unexpected staining is observed which cannot be explained by variations in laboratory procedures and a problem with the antibody is suspected, contact Zytomed Systems' technical support or your local distributor.

Precautions

Use through qualified personnel only. Wear protective clothing to avoid contact of reagents and specimens with eye, skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with large amounts of water.

Microbial contamination of the reagent must be avoided, since otherwise non-specific staining may occur.

ProClin300 and sodium azide (NaN₃) are used for stabilisation. Reaction of sodium azide with lead or copper in drainage pipes can result in the formation of highly explosive metallic azides. Discard the antibody solution in a large volume of running water to avoid formation of deposits. A material safety data sheet (MSDS) for the pure substances is available upon request.

Staining procedure

Refer to the following table for conditions specifically recommended for this antibody. Also refer to detection system data sheets for guidance on specific staining protocols or other requirements.

<u>Parameters</u>	<u>Zytomed Systems recommendations</u>
*Pre-treatment:	Heat Induced Epitope Retrieval (for example in Citrate Buffer pH 6.0)
*Control tissue:	Prostate
*Working dilution:	None
*Incubation time:	60 minutes

Quality control

The recommended positive control tissue for this antibody is a prostate. We recommend carrying out a positive and a negative control with every staining run. Please refer to the instructions of the detection system for guidance on general quality control procedures.

Troubleshooting

If you observe unusual staining or other deviations from the expected results please read these instructions carefully, refer to the instructions of the detection system for relevant information or contact your local distributor.

Expected results

The antibodies against Cytokeratins 5 and 14 stain positive in the cytoplasm of basal cells of many epithelial tissues. Interpretation of the staining results is solely the responsibility of the user. Any experimental result should be confirmed by a medically established diagnostic procedure.

Limitations of the Procedure

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining, for example variations in fixation and embedding or the inherent nature of the tissue can cause inconsistent results (Nadji and Morales, 1983). Endogenous peroxidase, pseudoperoxidase activity in erythrocytes or biotin may cause non-specific staining depending on the detection system used. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive results with HRP (horse radish peroxidase) detection systems (Omata *et al*, 1980). Inadequate counterstaining and mounting can influence the interpretation of the results.

Zytomed Systems warrants that the product will meet all requirements described from its shipping date until the expiry date is reached, if the product is stored and utilised as recommended. No additional guarantees can be given. Under no circumstances shall Zytomed System be liable for any damages arising out of the use of the reagent provided.

Performance characteristics

Zytomed Systems has conducted studies to evaluate the performance of the antibody for use with a standard detection system. The product has been found to be sensitive and specific to the antigen of interest with minimal or no cross-reactivity.

Bibliography:

Bánkfalvi A *et al* (2004) *Mod Pathol* 17:1051 ff
Hungermann D *et al* (2005) *BMC Cancer* 5
Omata M *et al* (1980) *Am J Clin Pathol* 73: 626 ff
Whitlock *et al*. *Biochem Biophys Res Commun* 274: 149, 2000
Purkis *et al*. *J Cell Sci* 97: 39, 1990

Böcker W *et al* (1997) *Pathologe* 18:3 ff
Nadji M and Morales AR (1983) *Ann NY Acad Sci* 420:134 ff
Irvine *et al*. *J Invest Dermatol* 108: 809, 1997
Moll *et al*. *Cell* 31: 11, 1982
Westzels *et al*. *Am J Pathol* 134: 571, 1989



www.zytomed-systems.de
Zytomed Systems GmbH • Anhaltinerstraße 16 •
14163 Berlin, Germany • Tel: (+49) 30-804 984
990

Explanations of the symbols on the product

label

Symbols are used in accordance with ISO 15223-1. Further symbols on the product label might be:



GSH07: Warning / Attention

RUO

For Research Use Only