



## Mouse anti-Cytokeratin 7 (OV-TL 12/30)

Cat. No.: MSK032 (1 ml Concentrate); MSK032-05 (0.5 ml Concentrate);  
MSG032 (6 ml Ready-to-use)

### Instructions for use

#### Intended Use

This antibody is designed for the specific localization of Cytokeratin 7 in formalin-fixed, paraffin-embedded tissue sections. Anti-Cytokeratin 7 antibody is intended for in vitro diagnostic use.

#### Specifications

<b>Specificity:</b>	Cytokeratin 7
<b>Immunogen:</b>	Ovarian carcinoma cell line OTN II
<b>Clone:</b>	OV-TL 12/30
<b>Isotype:</b>	Mouse IgG1 $\kappa$
<b>Species reactivity:</b>	human +, rat -, others not tested

#### Summary and explanation

Cytokeratins (CK) are intermediate filaments which are expressed in all epithelial cells and in very few non-epithelial cells too. They are differentiated in two subgroups:

Typ I: acidic cytokeratins (CK9 to 20 according to R. Moll)

Typ II: basic cytokeratins (CK1 to 8 according to R. Moll).

In the cell each Typ I-Cytokeratin is always expressed together with one Typ II-Cytokeratin. Therefore all epithelial cells contain at least two different cytokeratins. An exception of this rule is only CK19 which is only found without a partner.

The molecular weight of Cytokeratin 7 is 54 kDa. It is a marker for simple epithelia.

The antibody reacts with most ductal and glandular epithelia. It is also present in epithelia of the urinary tract as well as in epithelial cells of the bile duct. Cytokeratin 7 allows for the differentiation of epithelia of lung, breast, colon, and prostate. Lung and breast epithelia are positive for CK7 unlike to epithelia of colon and prostate which are negative for Cytokeratin 7.

#### Reagent provided

Mouse monoclonal antibody in buffer solution with carrier protein and preservative for stabilisation in the following formats:

<b>Concentrate:</b>	1 ml	(Cat. no. MSK032)
<b>Concentrate:</b>	0.5 ml	(Cat. no. MSK032-05)
<b>Pre-diluted:</b>	6 ml	(Cat. no. MSG032)

#### Dilution of primary antibody

Dilution of Zytomed Systems' concentrated antibody depends on the detection system used. The final working dilution must always be determined by the user. The elaboration of staining protocol should be done by an experienced specialist. For Zytomed Systems' recommendations see chapter 'Staining procedure'.

#### Storage and handling

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

Dilutions of the concentrated antibody should be done with 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 provided is stable 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 is used for stabilisation. Material safety data sheets (MSDS) are 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.

Parameters	Zytomed Systems recommendations
*Pre-treatment:	Enzymatic pre-treatment (for example with Trypsin ZUC043-155) or Heat Induced Epitope Retrieval (for example in citrate buffer pH 6.0 ZUC028)
*Control tissue	Pancreas or skin
*Working dilution	1:100-1:200 (for concentrated antibodies)
*Incubation time	30 – 60 minutes

### Quality control

The recommended positive control tissues for this antibody are pancreas or skin. 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 antibody stains positive in the cytoplasm of epithelial and mesothelial cells in formalin-fixed, paraffin-embedded tissue. Further details about the expression pattern of Cytokeratin 7 can be found in the chapter 'Summary and Description'. The interpretation of the 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, alkaline phosphatase 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 utilising 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

Moll R et al. Cell 31:11-24, 1982  
 Van Niekerk CC et al. Am J Pathology 1991;138:455-463  
 Rullier A et al. Am J Surg Pathol. 2000 Jun;24(6):870-6  
 Nadji M and Morales AR Ann N.Y. Acad Sci 420:134-9, 1983

Van de Molengraft FJJM et al. Histopathology 1993;22:35-38  
 Ramaekers F et al. Exp Cell Res 1987;170:235-249  
 Nan Ping Wang et al. Appl Immunohistchem 1995;3(2):99-107  
 Omata M et al. Am J Clin Pathol 73(5): 626-32, 1980

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Explanations of the symbols on the product label:

<b>REF</b>	Bestellnummer Catalog Number Reference du catalogue		Verwendbar bis Use By Utiliser jusque		Gebrauchsanweisung beachten Consult Instructions for use Consulter les instructions d'utilisation
<b>LOT</b>	Chargenbezeichnung Batch Code Code du lot		Lagerungstemperatur Temperature Limitation Limites de température	<b>RUO</b>	Nur für Forschungszwecke For Research Use Only Pour la recherche uniquement
<b>IVD</b>	In vitro Diagnostikum In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro		Achtung Warning Attention		Hersteller / Manufacturer / Fabricant Zytomed Systems GmbH • Anhaltinerstraße 16 14163 Berlin, Germany • Tel: (+49) 30-804 984 990 www.zytomed-systems.com