

## Cytokeratin 17 (EP98)


### Rabbit anti-human Cytokeratin 17 Monoclonal Antibody (Clone EP98)

#### REFERENCES AND PRESENTATIONS<sup>1</sup>

- **ready-to-use** (manual or LabVision AutoStainer)  
MAD-000734QD-3  
MAD-000734QD-7  
MAD-000734QD-12
- **Ready-to-use (MD-Stainer)<sup>2</sup>**  
MAD-000734QD-3/V  
MAD-000734QD/V
- **concentrated**  
MAD-000734Q - 1:50 recommended dilution

#### COMPOSITION

Anti-human Cytokeratin 17 rabbit monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide

**INTENDED USE** : Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting

**CLONE:** EP98<sup>3</sup>

**Ig ISOTYPE:** Rabbit IgG

**IMMUNOGEN:** Synthetic peptide corresponding to the human cytokeratin 17.

**SPECIES REACTIVITY:** In vitro diagnostics in humans. Not tested in other species

#### DESCRIPTION AND APPLICATIONS:

The widely known intermediate filaments proteins, which measure between 7 and 22 nm diameter (that is, a size between the one of the actin -5-7 nm and the tubulin -22-25 nm-), along with the previous ones, belong to the cytoskeleton of the vertebrates. This superfamily is made up of six subfamilies of molecules with different tissue expressions.

Cytokeratins make up the homology I and II in humans. They are encoded in more than 49 different genes in the chromosomes 17 (I) and 12 (II). The nomenclature adopted in 1982 by Moll and Franke assigns the ranks 1 to 8 for the type II cytokeratins (neutral or basic) and between 9 and 21 for the type I

(acid). Nowadays, an analogue nomenclature has been defined to name the hair keratin with the

addition of the Ha and Hb letters to separate the ones of the group I from group II.

Structurally speaking, cytokeratins share with the rest of intermediate filaments a central axis of 310 amino acids made up of four  $\alpha$ -helices domains (1A, 1B, 2A and 2B) highly preserved that define the type of intermediate filament that they will make up after its packing, separated by three non-helix binding sites (L1, L12 and L2) and two extreme domains highly different in size and sequence (head-1- and tail-2-), each of them with constant (E1/E2), variable (V1/V2) and homology regions (H1/H2), the last ones are characteristic of the type II keratins and absent of the type I. In variable domains, they have the most immunogenic properties and the main differences between each type of keratin. Usually, keratins assemble in heterodimers I/II and they co-express in pairs specifically in each tissue.

Cytokeratin 17 of 46 kDa of molecular mass is a type I intermediate filament with an isoelectric point of 5.1 encoded by the gene of the same name located in the chromosome 17.

Cytokeratin 17 is expressed in the basal and suprabasal cells of complex epithelium of the skin and skin adnexa.

Furthermore, it is expressed in the basal cells of the pseudostratified epithelium of the trachea, larynx and bronchus. This antibody reacts with myoepithelial cells of the salivary and sweat glands.

This antibody is useful to diagnose epithelial neoplasias that express cytokeratin 17 such as basal cell carcinomas, squamous lung cancers, adenoid cystic and mucoepidermoid salivary gland carcinomas, mesotheliomas, cholangiocarcinomas and numerous lung adenocarcinomas (>50%), colorectal adenocarcinomas (<50%), pancreatic adenocarcinomas (30%). Cytokeratin 17 is not detected in gastric adenocarcinomas, mucinous colorectal adenocarcinomas, hepatocellular carcinomas and Merkel-cell carcinomas.

**IHC POSITIVE CONTROL:** Tissue section of the trachea.

**VISUALIZATION:** Cytoplasmic.

#### IHC RECOMMENDED PROCEDURE:

- 4 $\mu$ m thick section should be taken on charged slides; dry overnight at 60°C
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module

<sup>1</sup> These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:

- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).

- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).

For different presentations (references / volumes) please contact the supplier.

<sup>2</sup> For Technical specifications for MD-Stainer, please contact your distributor.

<sup>3</sup> CK17 clone EP98 is manufactured using Epitomics's RabMAb® technology under U.S. Patent Nos. 5,675,063 and 7,402,409



**Vitro S.A.**

Calle Luís Fuentes Bejarano 60 Ed. Nudo Norte Local 3 41020 Sevilla (Spain)  
Tel: +34 954 933 200. [vitr@vitro.bio](mailto:vitr@vitro.bio) ; [www.vitro.bio](http://www.vitro.bio)





2018-02-01

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using Vitro S.A EDTA buffer pH8<sup>4</sup> for 20 min at 95°C. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min

- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 20 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

**STORAGE AND STABILITY:**  Stored at 2-8°C. Do not freeze.  Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

#### WARNINGS AND PRECAUTIONS:

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

#### SAFETY RECOMMENDATIONS










This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at [www.vitro.bio](http://www.vitro.bio) or can be requested at [regulatory@vitro.bio](mailto:regulatory@vitro.bio).

#### BIBLIOGRAPHY

1. Chu PG, Weiss LM. Keratin expression in human tissues and neoplasms. Histopathology. 40 (5): 403-439 (2002).

#### LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
	Catalog number
	Lot code
	Refer to the instructions of use
	Medical product for <i>in vitro</i> diagnosis.
	Material safety data sheet

<sup>4</sup> Ref: MAD-004072R/D