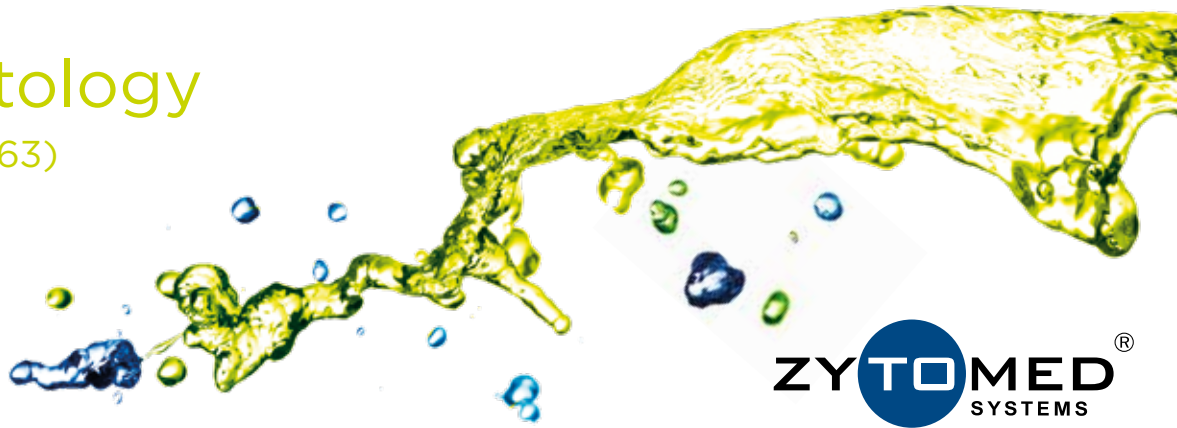


Immunohistochemistry

p40 antibody ($\Delta Np63$)



BC28: The monoclonal antibody against p40 ($\Delta Np63$)

A highly specific and sensitive detection of basal cell and squamous cell carcinomas

In recent years, several studies have shown that p63, the standard marker for pulmonary squamous cell carcinoma, has shown an excellent sensitivity of nearly 100%, it is not fully specific for but is not fully specific for squamous cell carcinoma differentiation [1].

Therefore, since 2012, a truncated form of the p63 protein, the p40 (or $\Delta Np63$) protein, has been discussed and recommended [2,3].

p40 exhibits the same sensitivity as p63, but has a much higher specificity for squamous cell carcinoma of the lung (see Table 1).

The authors conclude that the use of the p40 marker may be superior to p63 detection in the diagnosis of pulmonary squamous cell carcinoma of the lung is preferable.

A publication from Histopathology [5] further describes that detection of p40 is also superior to that of p63 in imaging basal cells in the prostate.

► **Table 1: p40 and p63 expression in adeno- and squamous cell carcinomas of the lung and in large cell lymphomas (after Bishop *et al.* 2012).**

Tissue	p40 Positivity	p63 Positivity
Lung, squamous cell carcinoma (n=81)	100 %	100 %
Lung, Adenocarcinoma (n=237)	3 %	31 %
Large cell lymphomas (n=152)	0 %	54 %

* In all cases, less than 5% of tumor cells p40 positive.

In the majority of studies published to date, a rabbit polyclonal antibody has been used for p40 detection. This stains nuclear as expected, but in many cases also shows slight cytoplasmic staining. Although this background staining is usually diagnostically irrelevant, it has nevertheless led to the fact that some laboratories take a critical view of p40 immunohistochemistry.

As an alternative, Zytomed Systems offers a CE/IVD-classified mouse monoclonal antibody against the p40 protein. This antibody leads to the same staining intensity as the polyclonal antibody for the

same protocol, but in contrast to the polyclonal antibody it shows a clearly demarcated nuclear staining (Figs. 1 and 2).

Immunohistochemistry on formalin-fixed paraffine sections works reproducibly with the p40 monoclonal antibody using various heat pretreatments (HIER). As with many other antibodies, HIER in citrate buffer is gentler on tissue, while HIER in alkaline EDTA buffer results in stronger signals. In the example opposite (Figs. 3 and 4), the antibody was therefore used at a higher dilution after EDTA pretreatment.

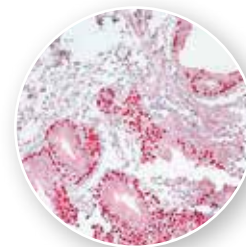


Figure 1: p40 detection of prostate tissue with polyclonal p40 antibody
Pretreatment (HIER) in EDTA buffer pH 9.0
RBK054, 1:200
AP-Polymer with Permanent AP Red

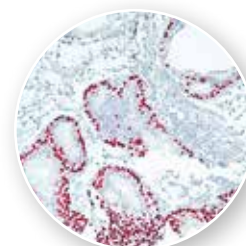


Figure 2: p40 detection of prostate tissue with monoclonal p40 antibody
Pretreatment (HIER) in EDTA buffer pH 9.0
ACI3066, 1:200
AP-Polymer with Permanent AP Red

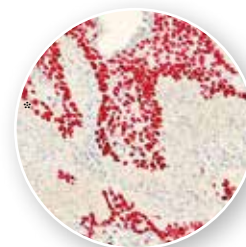


Figure 3: p40 detection of pulmonary Squamous cell carcinoma
Pretreatment (HIER) in citrate buffer pH 6.0
ACI3066, 1:100
AP-Polymer with Permanent AP Red

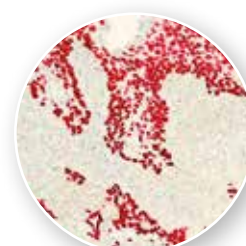
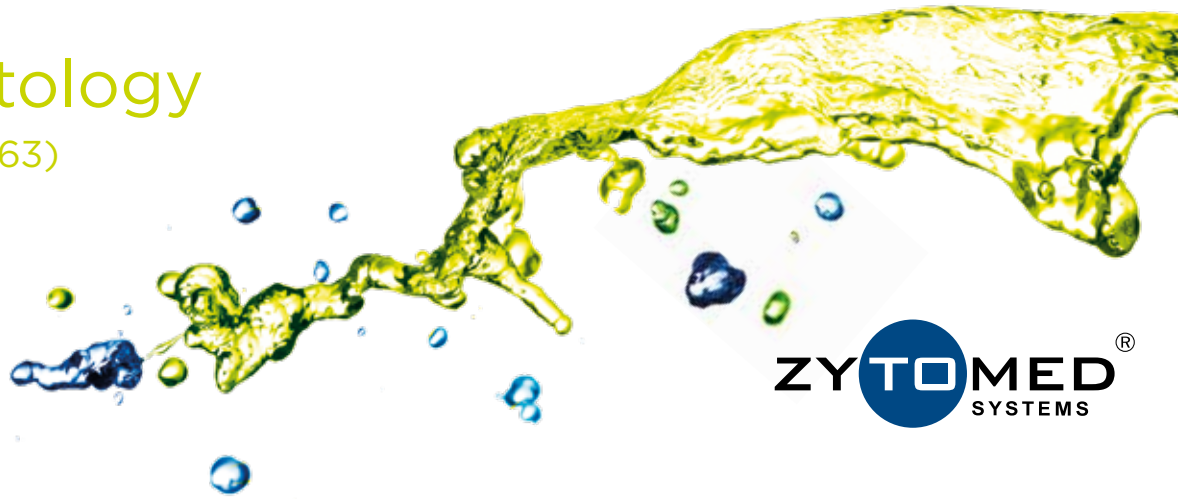


Figure 4: p40 detection of pulmonary Squamous cell carcinoma
Pretreatment (HIER) in EDTA buffer pH 9.0
ACI3066, 1:200
AP-Polymer with Permanent AP Red

Immunohistology

p40 antibody (Δ Np63)



ZYTOMED[®]
SYSTEMS

► Product information

Description	pretreatment	Vorbereitung	Dilution	Format	Art.-No.
p40 (ΔNp63) Clone: BC28 Host: Mouse Status: CE/IVD	CE/IVD	HIER Citrate Buffer pH 6,0	Ready-to-use	6 ml	API3066AA
				25 ml	API3066H
			1:50 – 1:200	0,1 ml	ACI3066A
				1 ml	ACI3066C

All prices for our products can be found at www.zytomed-systems.de.

► Literatur

- [1] Au NH *et al.* Appl Immunohistochem Mol Morphol 12:240-247, 2004
- [2] Nonaka D. Am J Surg Pathol 36:895-899, 2012
- [3] Bishop JA *et al.* Mod Pathol; 25:405-415, 2012
- [4] Pelosi G *et al.* J Thorac Oncol 7:281-290, 2012
- [5] Sailer V *et al.* Histopathol 63:50-56, 2013

Fax reply to 030-804 984 999

Monoclonal antibody against p40

Please send us the following documents:

- Data sheet for monoclonal antibody against p40
- Data sheet for monoclonal antibody against napsin A (marker for pulmonary adenocarcinoma)
- Data sheet for monoclonal antibody against uroplakin II (marker for urothelial carcinoma)
- Data sheet for monoclonal antibody against pHH3 (mitotic marker phosphohistone H3)
- Data sheet on monoclonal antibody against GATA3 (marker for mammary and urothelial carcinomas)
- Poster „ Efficient immunohistochemical differential diagnosis of undifferentiated neoplasia „ (New Edition 2022)

Please send us further information on the following topics/products/primary antibodies:

My address is:

Customer number (if available)

Name

Institute/Company

Department

Phone number

Address