

## CK5/14 + P63 + CK7/18 MULTIPLEX IHC

Format	Catalogno.	Pack size	Dilution
Concentrated	-	-	-
Prediluted	GB225DSAA	6.0 mL	Ready to use

**PRODUCT DESCRIPTION -**

mRNA for CK5 and CK14 has been discovered in the basal cells of normal prostate glands and prostatic intraepithelial neoplasia (PIN), a precursor to prostatic adenocarcinoma; however, expression of CK5 or CK14 was absent in invasive prostatic cancer. p63 was identified in the nuclei of the basal epithelium in normal prostate glands; however, it was absent in malignant prostate tumors. P504S has been demonstrated as a specific marker for prostatic cancer in immunohistochemistry (IHC). Moreover, prostate glands associated with PIN have been seen to exhibit P504S, while P504S was almost imperceptible in benign glands.

**INTENDED USE -**

CK5/14 + p63 + P504S is a combination of mouse and rabbit monoclonal antibodies designed for laboratory application in the qualitative detection of CK5/14, p63, and P504S proteins via immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical assessment of any staining or its absence must be supplemented by morphological analyses with appropriate controls and should be considered in conjunction with the patient's clinical history and other diagnostic evaluations by a certified pathologist.

**SUMMARY AND EXPLANATION -**

CK5 and CK14 are high molecular weight cytokeratins seen in several normal and malignant epithelial tissues. mRNA for CK5 and CK14 has been discovered in the basal cells of normal prostate glands and prostatic intraepithelial neoplasia (PIN), a precursor to prostatic adenocarcinoma; however, expression of CK5 or CK14 was absent in invasive prostatic adenocarcinoma. P63, a homolog of the tumor suppressor p53, has been discovered in proliferating basal cells inside the epithelial layers of several tissues, including the epidermis, cervix, urothelium, and prostate. p63 was identified in the nuclei of the basal epithelium in normal prostate glands; however, it was absent in malignant prostate tumors. P504S, or  $\alpha$ -methylacyl

coenzyme A racemase (AMACR), is an enzyme located in peroxisomes and mitochondria that is involved in bile acid production and the  $\beta$ -oxidation of branched-chain fatty acids. P504S was first identified from a cDNA library as a gene that is overexpressed in human prostate cancer, exhibiting minimal or absent expression in normal prostate tissue. P504S has been identified as a specific marker for prostatic cancer in immunohistochemistry. Moreover, prostate glands associated with PIN have been seen to exhibit P504S, while P504S was almost imperceptible in benign glands.

#### PRINCIPLE OF PROCEDURE -

This product is a primary antibody cocktail comprising mouse and rabbit antibodies, suitable for use in a Multiplex IHC staining process to achieve a two-color stain. After administering the primary antibody cocktail to the tissue sample, detection is executed using distinct secondary antibodies tailored to each species (i.e., mouse or rabbit) of the primary antibody cocktail, which are conjugated to horseradish peroxidase (HRP) or alkaline phosphatase (AP) enzymes. Visualization is achieved through the utilization of chromogenic substrates (DAB and Red), which are enzymatically activated (by HRP or AP, respectively) to generate a colorful reaction product at the antigen site. The specimen may undergo counterstaining and be coverslipped. Results are analyzed utilizing a light microscope.

#### Reagent Provided:

CK5/14 + p63 + P504S is provided as a prediluted antibody cocktail of anti-CK5, anti-CK14, anti-p63, and anti-P504S antibodies in buffer with carrier protein and preservative.

Antibody	anti-CK5	anti-CK14	anti-p63	anti-PS04S
CLONE	XM26	LL002	4A4	N/A
SOURCE	Mouse monoclonal	Mouse monoclonal	Mouse monoclonal	Rabbit polyclonal
ISOTYPE	IgG1/kappa	IgG3	IgG2a/kappa	IgG
EPITOPE/ ANTIGEN	CK5	CK14	p63	PS04S
CELLULAR LOCALISATION	Cytoplasmic	Cytoplasmic	nuclear	Granular cytoplasm
STAINING	Brown (DAB)	Brown (DAB)	Brown (DAB)	Red (warp red)

SPECIES REACTIVITY - Human

POSITIVE TISSUE CONTROL - Normal prostate and prostatic adenocarcinoma

KNOWN APPLICATIONS - Immunohistochemistry 30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffered saline solution, pH 6.1 – 7.4, containing a protein carrier and less than 0.1% sodium azide preservative.

STORAGE AND STABILITY -

Store at 2°C to 8°C. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date.

Materials required but not provided -

- 1) Positive tissue control- Normal prostate and prostatic adenocarcinoma
- 2) Negative control tissue (internal or external)
- 3) Microscope slides and coverslips
- 4) Staining jars or baths
- 5) Timer
- 6) Xylene or xylene substitute
- 7) Ethanol or reagent alcohol
- 8) Deionized or distilled water
- 9) Heating equipment or enzyme for tissue pretreatment step
- 10) Detection system
- 11) Chromogen
- 12) Wash buffer
- 13) Hematoxylin
- 14) Antibody diluents
- 15) Peroxide block
- 16) Light microscope
- 17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not

applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.