

## Product datasheet

### Anti-p63 antibody [EPR5701] ab124762

Recombinant RabMAb

★★★★★ [10 Abreviews](#) [101 References](#) [7 Images](#)

#### Overview

|                            |   |
|----------------------------|---|
| <b>Product name</b>        | Anti-p63 antibody [EPR5701]   |
| <b>Description</b>         | Rabbit monoclonal [EPR5701] to p63  |
| <b>Host species</b>        | Rabbit  |
| <b>Specificity</b>         | The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.   |
| <b>Tested applications</b> | <b>Suitable for:</b> Flow Cyt (Intra), WB, IHC-P, ICC/IF, mIHC  |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Mouse, Rat, Human   |
| <b>Immunogen</b>           | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.  |
| <b>Positive control</b>    | WB: Rat bladder and skin, Mouse bladder, skin and thymus tissue lysates; HaCaT, PC-12, and A431 cell lysates; IHC-P: Human breast tissue; ICC/IF: A431 and primary corneal limbal cells; Flow Cyt (intra): A431 cells. mIHC: Human prostate gland tissues.  |
| <b>General notes</b>       | <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> |

#### Properties

|                             |   |
|-----------------------------|---|
| <b>Form</b>                 | Liquid  |
| <b>Storage instructions</b> | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. |
| <b>Storage buffer</b>       | <p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 40% Glycerol, 0.05% BSA, 59% PBS</p>                     |
| <b>Purity</b>               | Protein A purified  |
| <b>Clonality</b>            | Monoclonal  |

|              |         |
|--------------|---------|
| Clone number | EPR5701 |
| Isotype      | IgG     |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab124762 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application      | Abreviews | Notes  |
|------------------|-----------|--|
| Flow Cyt (Intra) |           | 1/80.<br>For unpurified, use 1/1000. <b>ab172730</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.  |
| WB               | ★★★★★ (2) | 1/1000. Detects a band of approximately 50-75 kDa (predicted molecular weight: 77 kDa). <b>For unpurified, use 1/200.</b>  |
| IHC-P            | ★★★★★ (5) | 1/5000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.<br><b>For unpurified, use 1/2500.</b><br>See <b>IHC antigen retrieval protocols</b> .<br>The immunostaining was performed on a Leica Biosystems BOND® RX instrument. |
| ICC/IF           | ★★★★★ (1) | 1/200. <b>For unpurified, use 1/60.</b>  |
| mlHC             |           | 1/5000.  |

## Target

|                               |   |
|-------------------------------|---|
| <b>Function</b>               | Acts as a sequence specific DNA binding transcriptional activator or repressor. The isoforms contain a varying set of transactivation and auto-regulating transactivation inhibiting domains thus showing an isoform specific activity. May be required in conjunction with TP73/p73 for initiation of p53/TP53 dependent apoptosis in response to genotoxic insults and the presence of activated oncogenes. Involved in Notch signaling by probably inducing JAG1 and JAG2. Plays a role in the regulation of epithelial morphogenesis. The ratio of DeltaN-type and TA*-type isoforms may govern the maintenance of epithelial stem cell compartments and regulate the initiation of epithelial stratification from the undifferentiated embryonal ectoderm. Required for limb formation from the apical ectodermal ridge. |
| <b>Tissue specificity</b>     | Widely expressed, notably in heart, kidney, placenta, prostate, skeletal muscle, testis and thymus, although the precise isoform varies according to tissue type. Progenitor cell layers of skin, breast, eye and prostate express high levels of DeltaN-type isoforms. Isoform 10 is predominantly expressed in skin squamous cell carcinomas, but not in normal skin tissues.   |
| <b>Involvement in disease</b> | Defects in TP63 are the cause of acro-dermato-ungual-lacrima-tooth syndrome (ADULT syndrome) [MIM:103285]; a form of ectodermal dysplasia. Ectodermal dysplasias (EDs) constitute a heterogeneous group of developmental disorders affecting tissues of ectodermal origin. EDs are characterized by abnormal development of two or more ectodermal structures   |

such as hair, teeth, nails and sweat glands, with or without any additional clinical sign. Each combination of clinical features represents a different type of ectodermal dysplasia. ADULT syndrome involves ectrodactyly, syndactyly, finger- and toenail dysplasia, hypoplastic breasts and nipples, intensive freckling, lacrimal duct atresia, frontal alopecia, primary hypodontia, and loss of permanent teeth. ADULT differs significantly from EEC3 syndrome by the absence of facial clefting.

Defects in TP63 are the cause of ankyloblepharon-ectodermal defects-cleft lip/palate (AEC) [MIM:106260]. AEC is an autosomal dominant condition characterized by congenital ectodermal dysplasia with coarse, wiry, sparse hair, dystrophic nails, slight hypohidrosis, scalp infections, ankyloblepharon filiform adnatum, maxillary hypoplasia, hypodontia and cleft lip/palate.

Defects in TP63 are the cause of ectrodactyly-ectodermal dysplasia-cleft lip/palate syndrome type 3 (EEC3) [MIM:604292]. EEC3 is an autosomal dominant syndrome characterized by ectrodactyly of hands and feet, ectodermal dysplasia and facial clefting.

Defects in TP63 are the cause of split-hand/foot malformation type 4 (SHFM4) [MIM:605289]. Split-hand/split-foot malformation is a limb malformation involving the central rays of the autopod and presenting with syndactyly, median clefts of the hands and feet, and aplasia and/or hypoplasia of the phalanges, metacarpals, and metatarsals. There is restricted overlap between the mutational spectra of EEC3 and SHFM4.

Defects in TP63 are the cause of limb-mammary syndrome (LMS) [MIM:603543]. LMS is characterized by ectrodactyly, cleft palate and mammary-gland abnormalities.

Note=Defects in TP63 are a cause of cervical, colon, head and neck, lung and ovarian cancers.

Defects in TP63 are a cause of ectodermal dysplasia Rapp-Hodgkin type (EDRH) [MIM:129400]; also called Rapp-Hodgkin syndrome or anhidrotic ectodermal dysplasia with cleft lip/palate.

Ectodermal dysplasia defines a heterogeneous group of disorders due to abnormal development of two or more ectodermal structures. EDRH is characterized by the combination of anhidrotic ectodermal dysplasia, cleft lip, and cleft palate. The clinical syndrome is comprised of a characteristic facies (narrow nose and small mouth), wiry, slow-growing, and uncombable hair, sparse eyelashes and eyebrows, obstructed lacrimal puncta/epiphora, bilateral stenosis of external auditory canals, microsomia, hypodontia, cone-shaped incisors, enamel hypoplasia, dystrophic nails, and cleft lip/cleft palate.

Defects in TP63 are the cause of non-syndromic orofacial cleft type 8 (OFC8) [MIM:129400]. Non-syndromic orofacial cleft is a common birth defect consisting of cleft lips with or without cleft palate. Cleft lips are associated with cleft palate in two-third of cases. A cleft lip can occur on one or both sides and range in severity from a simple notch in the upper lip to a complete opening in the lip extending into the floor of the nostril and involving the upper gum.

#### Sequence similarities

Belongs to the p53 family.

Contains 1 SAM (sterile alpha motif) domain.

#### Domain

The transactivation inhibitory domain (TID) can interact with, and inhibit the activity of the N-terminal transcriptional activation domain of TA\*-type isoforms.

#### Post-translational modifications

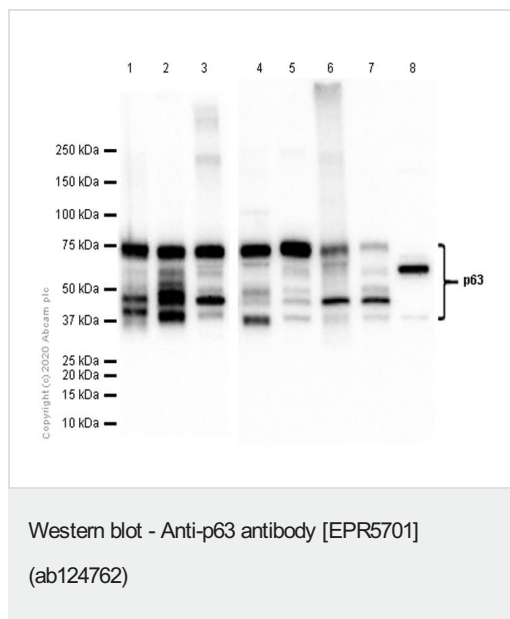
May be sumoylated.

Ubiquitinated. Polyubiquitination involves WWP1 and leads to proteasomal degradation of this protein.

#### Cellular localization

Nucleus.

#### Images



**All lanes** : Anti-p63 antibody [EPR5701] (ab124762) at 1/1000 dilution (Purified)

**Lane 1** : HaCaT (Human skin keratinocyte) whole cell lysates

**Lane 2** : A431 (Human epidermoid carcinoma epithelial cell) whole cell lysates

**Lane 3** : Mouse skin lysates

**Lane 4** : Mouse thymus lysates

**Lane 5** : Mouse bladder lysates

**Lane 6** : Rat skin lysates

**Lane 7** : Rat bladder lysates

**Lane 8** : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates

Lysates/proteins at 20 µg per lane.

### Secondary

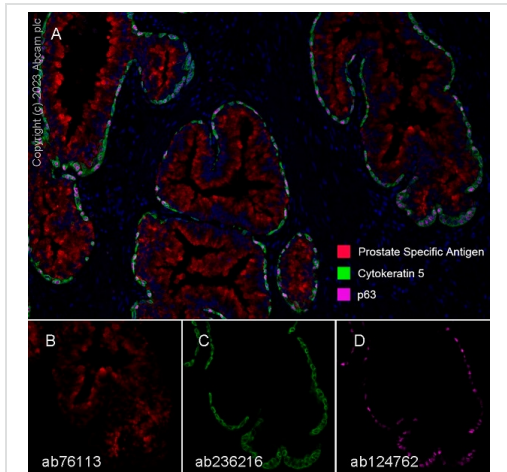
**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 77 kDa

**Observed band size:** 37-75 kDa

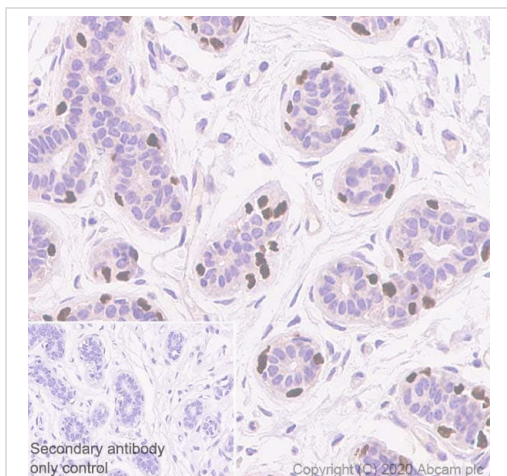
Blocking/Diluting buffer: 5% NFDM/TBST

The bands observed are consistent with what have been described in PMID 30649915 as isoforms of p63.



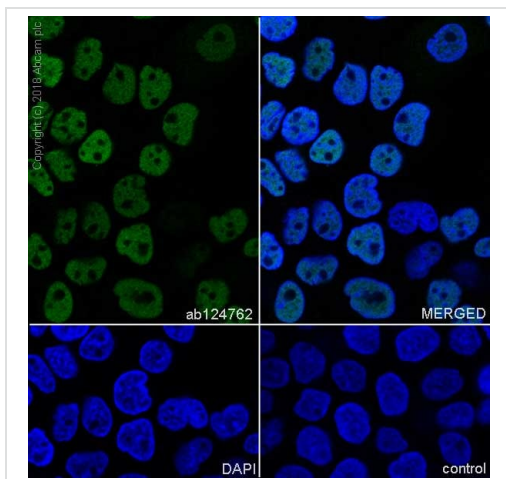
Multiplex immunohistochemistry - Anti-p63 antibody [EPR5701] (ab124762)

Fluorescence multiplex immunohistochemical analysis of human prostate gland tissue (formalin/PFA-fixed paraffin-embedded section). Panel A: merged staining of anti-p63 (ab124762, magenta; Opal™690), anti-Cytokeratin 5 (**ab236216**, green; Opal™520) and anti-Prostate Specific Antigen (**ab76113**, red; Opal™570) on human prostate gland tissue. Panel B: anti-Prostate Specific Antigen stained on luminal cells. Panel C: anti-Cytokeratin 5 stained on cytoplasm of basal cells. Panel D: anti-p63 stained on nucleus of basal cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab124762 (1/5000), **ab236216** (1/400), and **ab76113** (1/2000) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) was used for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.



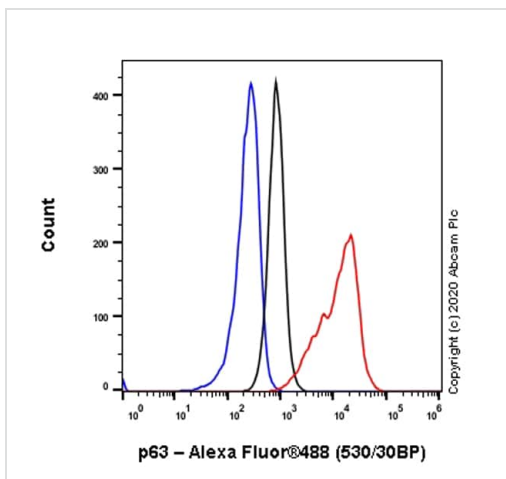
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p63 antibody [EPR5701] (ab124762)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast tissue sections labeling p63 with purified ab124762 at 1/5000 dilution (0.16 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



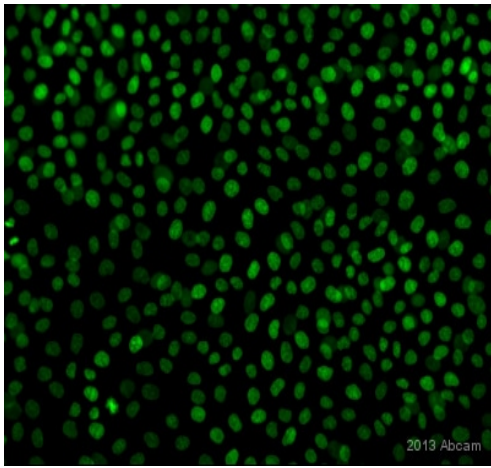
Immunocytochemistry/ Immunofluorescence - Anti-p63 antibody [EPR5701] (ab124762)

Immunocytochemistry/ Immunofluorescence analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling p63 with Purified ab124762 at 1/200 dilution (4 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-p63 antibody [EPR5701] (ab124762)

Intracellular Flow Cytometry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling p63 with Purified ab124762 at 1/80 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

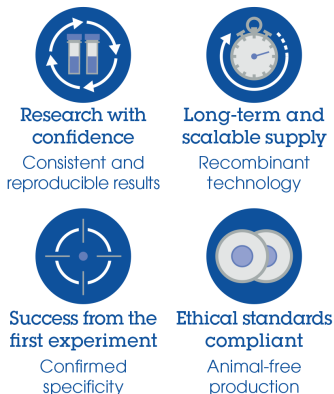


Immunocytochemistry/ Immunofluorescence - Anti-p63 antibody [EPR5701] (ab124762)

This image is courtesy of an Abreview submitted by Manuel Chacon

Unpurified ab124762 staining p63 in Human corneal limbal epithelial cells (primary culture) by ICC/IF (immunocytochemistry/immunofluorescence). Cells were fixed with methanol and permeabilized with 0.3% Triton X-100 for 5 minutes. Samples were incubated with primary antibody (1/100 in PBS + 10% Goat serum) for 18 hours at 4°C. An Alexa Fluor® 488-conjugated Goat anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody.

#### Why choose a recombinant antibody?



Anti-p63 antibody [EPR5701] (ab124762)

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