## Product Datasheet

### Anti-p63 antibody [4A4] ab735

**Overview**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
<td>Anti-p63 antibody [4A4]</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Mouse monoclonal [4A4] to p63</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Mouse</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: ICC/IF, IHC-P, IHC-Fr</td>
</tr>
</tbody>
</table>
| **Species reactivity**          | Reacts with: Mouse, Rat, Human, Turtle Predicted to work with: Dog  
  
  Database link: Q9H3D4-2 |
| **Immunogen**                   | Recombinant fragment corresponding to Human p63 aa 1-205. This antibody is raised against the N-terminus of ∆N p63 isoform of mouse protein. Database link: Q9H3D4-2 |
| **Positive control**            | Normal prostate.                                                                                                                                                                                             |
| **General notes**               | Please note that clone [BC4A4] and clone [4A4] are identical. This product was changed from ascites to tissue culture supernatant on [14/07/17]. The following lots are from ascites and are still in stock as of [14/07/17] – [GR323232, GR293168, GR301030]. Lot numbers higher than [GR323232] will be from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly. |

### Properties

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<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
</tr>
</tbody>
</table>
| **Storage buffer** | Preservative: 0.099% Sodium azide  
  Constituents: 0.9% Proprietary component, 99% Water |
| **Purity**       | Tissue culture supernatant                                                   |
| **Clonality**    | Monoclonal                                                                  |
| **Clone number** | 4A4                                                                          |
| **Myeloma**      | unknown                                                                      |
| **Isotype**      | IgG2a                                                                        |
| **Light chain type** | kappa                                                                    |
Function
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.

Tissue specificity
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.

Involvement in disease
Defects in TP63 are the cause of acro-dermato-ungual-lacrimal-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, 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**

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p63 antibody [4A4] (ab735)
Anti-p53 antibody (ab735) staining p63 in murine mammary gland tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer. Samples were then blocked with 4% serum for 1 hour at 22°C followed by incubation with the primary antibody at a 1/40 dilution for 15 hours at 4°C. A Biotin-conjugated anti-mouse polyclonal was used as secondary antibody at a 1/250 dilution. Note positive nuclear staining of the basal cell population.

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