

## p63 (E-9): sc-398800



The Power to Question

## BACKGROUND

Transcription factor p63 is a widely expressed nuclear protein that exists as 12 isoforms and is a member of the p53 gene family. Alternate promoters encode two main variants, TAp63 and  $\Delta$ Np63, which are further spliced into at least five isoforms, designated  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$ , due to alternative splicing events at the carboxy-terminus. TAp63 is transcribed from an upstream promoter containing a similar transactivation domain to p53, while  $\Delta$ Np63 is transcribed from a promoter located on intron 3, that results in a unique transactivation domain and distinct biological functions. Considered to be oncogenic,  $\Delta$ Np63 is required for cell growth and survival and can be dominant-negative over TAp63 and p53. TAp63 can transactivate some p53 target genes and is primarily responsible for tubulogenesis and cyst formation.

## REFERENCES

1. De Laurenzi, V., Costanzo, A., Barcaroli, D., Terrinoni, A., Falco, M., Annicchiarico-Petruzzelli, M., Levrero, M. and Melino, G. 1998. Two new p73 splice variants,  $\gamma$  and  $\delta$ , with different transcriptional activity. *J. Exp. Med.* 188: 1763-1768.
2. King, K.E., Ponnamperna, R.M., Gerdes, M.J., Tokino, T., Yamashita, T., Baker, C.C. and Weinberg, W.C. 2006. Unique domain functions of p63 isoforms that differentially regulate distinct aspects of epidermal homeostasis. *Carcinogenesis* 27: 53-63.
3. Vakonaki, E., Soultz, N., Sifakis, S., Papadogianni, D., Koutoulakis, D. and Spandidos, D.A. 2012. Overexpression and ratio disruption of  $\Delta$ Np63 and TAp63 isoform equilibrium in endometrial adenocarcinoma: correlation with obesity, menopause, and grade I/II tumors. *J. Cancer Res. Clin. Oncol.* 138: 1271-1278.
4. Warner, S.M., Hackett, T.L., Shaheen, F., Hallstrand, T.S., Kicic, A., Stick, S.M. and Knight, D.A. 2013. Transcription factor p63 regulates key genes and wound repair in human airway epithelial basal cells. *Am. J. Respir. Cell Mol. Biol.* 49: 978-988.
5. Pignon, J.C., Grisanzio, C., Geng, Y., Song, J., Shivdasani, R.A. and Signoretti, S. 2013. p63-expressing cells are the stem cells of developing prostate, bladder, and colorectal epithelia. *Proc. Natl. Acad. Sci. USA* 110: 8105-8110.
6. Zhang, Y., Yan, W. and Chen, X. 2014. p63 regulates tubular formation via epithelial-to-mesenchymal transition. *Oncogene* 33: 1548-1557.

## CHROMOSOMAL LOCATION

Genetic locus: TP63 (human) mapping to 3q28.

## SOURCE

p63 (E-9) is a mouse monoclonal antibody raised against amino acids 15-151 of  $\Delta$ N p63 $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p63 (E-9) is recommended for detection of all p63 isoforms of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p63 siRNA (h): sc-36161, p63 shRNA Plasmid (h): sc-36161-SH and p63 shRNA (h) Lentiviral Particles: sc-36161-V.

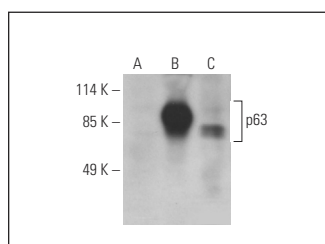
Molecular Weight of p63 isoforms: 45-77 kDa.

Positive Controls: p63 (h): 293T Lysate: sc-115838 or A-431 nuclear extract: sc-2122.

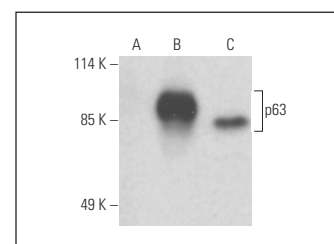
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



p63 (E-9): sc-398800. Western blot analysis of p63 expression in non-transfected 293T: sc-117752 (A) and human p63 transfected 293T: sc-115838 (B) whole cell lysates and A-431 nuclear extract (C). Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-516102.



p63 (E-9): sc-398800. Western blot analysis of p63 expression in non-transfected: sc-117752 (A) and human p63 transfected: sc-115838 (B) whole cell lysates and A-431 nuclear extract (C).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.