SANTA CRUZ BIOTECHNOLOGY, INC.

# p19 ARF (5-C3-1): sc-32748

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The progression of cells through the cell cycle is regulated by a family of proteins designated cyclin-dependent kinases (Cdks). Sequential activation of individual members of this family and their consequent phosphorylation of critical substrates, promote orderly progression through the cell cycle. The protein p16INK4A, identified as a negative regulator of the cell cycle, has been shown to bind to and inhibit the activity of the Cdk4/cyclin D complex. p19 ARF, which is unrelated to p16, arises from transcription of an alternative reading frame of the p16 gene. Like p16, p19 ARF has been shown to induce cell cycle arrest. Mice lacking p19 ARF but expressing functional p16 have been shown to develop tumors early in life. Further studies have indicated that p19 ARF may be disrupted in a large percentage of human T cell acute lymphoblastic leukemias.

## CHROMOSOMAL LOCATION

Genetic locus: Cdkn2a (mouse) mapping to 4 C4.

## SOURCE

p19 ARF (5-C3-1) is a rat monoclonal antibody raised against a mixture of two peptides corresponding to amino acids 54-75 and 156-169 of p19 ARF of mouse origin; epitope mapping to amino acids 62-75.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p19 ARF (5-C3-1) is available conjugated to agarose (sc-32748 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32748 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32748 PE), fluorescein (sc-32748 FITC), Alexa Fluor® 488 (sc-32748 AF488), Alexa Fluor® 546 (sc-32748 AF546), Alexa Fluor® 594 (sc-32748 AF594) or Alexa Fluor® 647 (sc-32748 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32748 AF680) or Alexa Fluor® 790 (sc-32748 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

p19 ARF (5-C3-1) is recommended for detection of p19 ARF of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with p19 ARF of human or golden hamster origin.

Suitable for use as control antibody for p19 ARF siRNA (m): sc-270046, p19 ARF shRNA Plasmid (m): sc-270046-SH and p19 ARF shRNA (m) Lentiviral Particles: sc-270046-V.

Molecular Weight of p19 ARF: 19 kDa.

Positive Controls: p19 ARF (m): 293T Lysate: sc-125763.

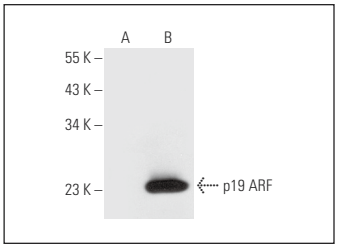
## STORAGE

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

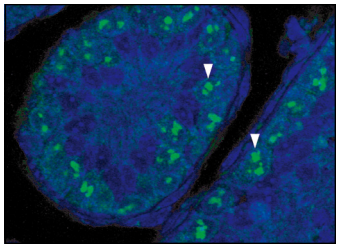
## RESEARCH USE

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

## DATA




p19 ARF (5-C3-1): sc-32748. Western blot analysis of p19 ARF expression in non-transfected: sc-117752 (**A**) and mouse p19 ARF transfected: sc-125763 (**B**) 293T whole cell lysates.



p19 ARF (5-C3-1): sc-32748. Immunofluorescence staining of wtMEFp6 cells showing nuclear localization. Kindly provided by St. Jude Children's Hospital.

## SELECT PRODUCT CITATIONS


1. Mallakin, A., et al. 2006. Expression of Dmp1 in specific differentiated, nonproliferating cells and its regulation by E2Fs. Oncogene 25: 7703-7713.
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3. Manzl, C., et al. 2012. PIDDosome-independent tumor suppression by caspase-2. Cell Death Differ. 19: 1722-1732.
4. Chen, D., et al. 2013. Differential effects on ARF stability by normal versus oncogenic levels of c-Myc expression. Mol. Cell 51: 46-56.
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6. Albers, J., et al. 2015. A versatile modular vector system for rapid combinatorial mammalian genetics. J. Clin. Invest. 125: 1603-1619.
7. Llanos, S., et al. 2016. Stabilization of p21 by mTORC1/4E-BP1 predicts clinical outcome of head and neck cancers. Nat. Commun. 7: 10438.
8. Devos, M., et al. 2017. Elevated ΔNp63α levels facilitate epidermal and biliary oncogenic transformation. J. Invest. Dermatol. 137: 494-505.
9. Ma, KH., et al. 2018. Polycomb repression regulates Schwann cell proliferation and axon regeneration after nerve injury. Glia 66: 2487-2502.
10. Vecchio, E., et al. 2019. IBTK contributes to B-cell lymphomagenesis in Eμ-Myc transgenic mice conferring resistance to apoptosis. Cell Death Dis. 10: 320.
11. Richart, L., et al. 2020. Bptf determines oncogenic addiction in aggressive B-cell lymphomas. Oncogene 39: 4884-4895.


## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.