

p14 ARF (H-132): sc-8340

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 promotes orderly progression through the cell cycle. Multiple proteins are encoded by the tumor suppressor gene CDKN2A (MTS1/p16^{INK4a}) via translation of alternate reading frames, resulting in the production of the p19 ARF protein in mice and the p14 ARF protein in humans. p14 ARF induces an increase in MDM2 and p21 levels and leads to cell cycle arrest in both G₁ and G₂/M. p14 ARF is negatively regulated by p53 and is known to bind directly to MDM2. CDKN2A also encodes the mitotic protein p16, which binds to and inhibits the Cdk4/cyclin D complex.

REFERENCES

- Sherr, C.J. 1993. Mammalian G₁ cyclins. *Cell* 73: 1059-1065.
- Hunter, T. 1993. Braking the cycle. *Cell* 75: 839-841.
- Larsen, C.J. 1997. Contribution of the dual coding capacity of the p16^{INK4a}/MTS1/CdkN2 locus to human malignancies. *Prog. Cell Cycle Res.* 3: 109-124.

CHROMOSOMAL LOCATION

Genetic locus: CDKN2A (human) mapping to 9p21.3.

SOURCE

p14 ARF (H-132) is a rabbit polyclonal antibody raised against amino acids 1-132 of p14 ARF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p14 ARF (H-132) is recommended for detection of p14 ARF of human 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 p14 ARF/p16 siRNA (h): sc-37622, p14 ARF/p16 shRNA Plasmid (h): sc-37622-SH and p14 ARF/p16 shRNA (h) Lentiviral Particles: sc-37622-V.

Molecular Weight of p14 ARF: 14 kDa.

Positive Controls: Saos-2 cell lysate: sc-2235, BJAB whole cell lysate: sc-2207 or HeLa whole cell lysate: sc-2200.

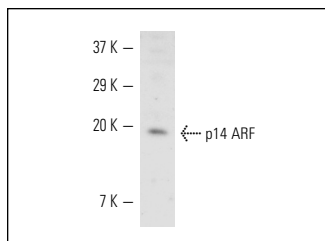
STORAGE

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

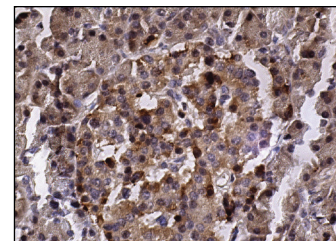
RESEARCH USE

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

DATA



p14 ARF (H-132): sc-8340. Western blot analysis of p14 ARF expression in BJAB whole cell lysate.



p14 ARF (H-132): sc-8340. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of Islets of Langerhans and glandular cells.

SELECT PRODUCT CITATIONS

- Fatylol, K., et al. 2001. The p14 ARF tumor suppressor protein facilitates-nucleolar sequestration of hypoxia-inducible factor-1 (HIF-1) and inhibits HIF-1-mediated transcription. *J. Biol. Chem.* 276: 28421-28429.
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- Olcha, P., et al. 2010. The pattern of p14 ARF expression in primary and metastatic human endometrial carcinomas: correlation with clinicopathological features and TP53 pathway alterations. *Int. J. Gynecol. Cancer* 20: 993-999.

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Try **p14 ARF (ARF 4C6/4): sc-53392** or **p14 ARF (14P02): sc-73434**, our highly recommended monoclonal alternatives to p14 ARF (H-132). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p14 ARF (ARF 4C6/4): sc-53392**.