

Datasheet for 200-501-891**p19Arf Antibody****Overview**

Description:	Anti-p19Arf (exon 2) (RAT) Monoclonal Antibody - 200-501-891
Item No.:	200-501-891
Size:	100 µg
Applications:	ELISA, IF, WB
Reactivity:	Human, Mouse, Hamster
Host Species:	Rat

Product Details

Background: The Ink4a-Arf locus encodes two tumor suppressor proteins, p16Ink4a and p19Arf. Expression of Ink4a and Arf is regulated by distinct promoters upstream of alternative first exons whose products are spliced to a common second exon translated in alternative reading frames (from which Arf gets its name). The two genes are induced by different stress signals and can be separately mutated or silenced in tumor cells. Targeted disruption of either or both genes in mouse leads to spontaneous tumor formation, which is accelerated by exposure of the mutant animals to chemical carcinogens or ionizing radiation. Inactivation of ARF by mutation, deletion, or epigenetic silencing is observed in many human cancers, underscoring the role of this protein as a potent and ubiquitous tumor suppressor. p19Arf is activated by Myc or mutant Ras. Once activated, p19Arf binds to the p53 negative regulator Mdm2, leading to p53 stabilization and unleashing a p53-dependent transcriptional program that triggers either cell cycle arrest or apoptosis. p19Arf also has p53-independent inhibitory effects on cell proliferation. p19Arf is a nucleolar protein and is implicated in ribosomal biogenesis.

Synonyms:	rat anti-p19Arf Antibody, Cyclin-dependent kinase inhibitor 2A isoform 3, p19 ARF
Host Species:	Rat
Clonality:	Monoclonal
Clone ID:	5.C3.1
Format:	IgG2b

Target Details

Gene Name:	Cdkn2a
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Reactivity:	Human, Mouse, Hamster
Immunogen Type:	Conjugated Peptide
Immunogen:	This protein G purified monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to an internal region near amino acid residues 54-75 of mouse p19Arf protein.
Purity/Specificity:	This is a Protein G purified antibody directed against mouse p19Arf protein. No reactivity is observed against human or hamster homologues. The epitope was putatively mapped to amino acids 62-75 of mouse p19Arf. BLAST analysis indicates that no significant sequence homology exists for this sequence with p19Arf homologues from other sources. The homologue from rat only shows 11 of 14 identities (78% homology). No additional information is available for reactivity with p19Arf protein from other sources.
Relevant Links:	• UniProtKB - Q64364 • NCBI - 1162947 • GeneID - 12578

Application Details

Tested Applications:	ELISA, IF, WB
Application Note:	This antibody has been tested for use in ELISA, western blotting, immunofluorescence microscopy, and immunoprecipitation. Specific conditions for western blotting reactivity should be optimized by the end user. Expect a band approximately 19 kDa in size corresponding to mouse p19Arf by western blotting in the appropriate cell line or lysate.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:20,000
IF:	1:500 - 1:2,000
IP:	1:100
WB:	1:500 - 1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer: None

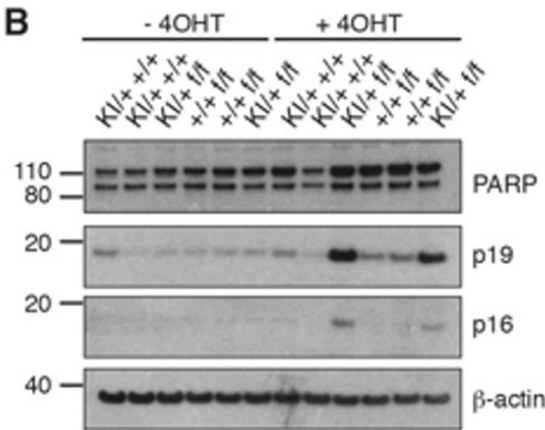
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

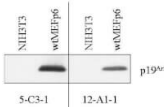
Expiration: Expiration date is one (1) year from date of receipt.

Images



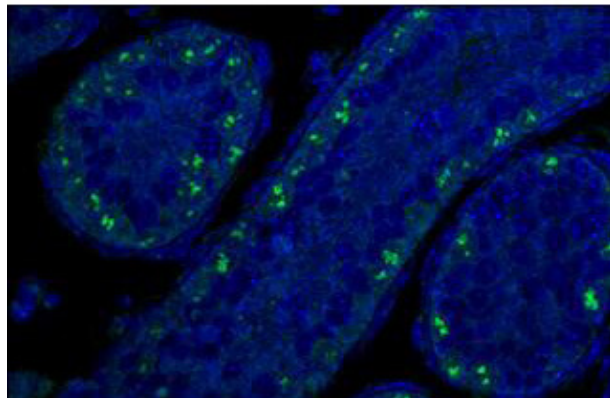
Western Blot

(B) Western blot analysis of protein expression in MECs from R26creERT2KI/+Suz12f/f mice and the indicated control genotypes following addition of 4OHT to induce Suz12 deletion on day 2. Cells were cultured for 1 week prior to preparation of protein lysates. Molecular mass in kDa of the protein ladder are shown on the left. Fig S3. PMID: 30080881



Western Blot

Western blot analysis is shown using Rockland's Protein G Purified Rat Monoclonal Anti-p19Arf antibody (5.C3.1) to detect endogenous mouse p19Arf protein present in wtMEFp6 cells (wild type mouse embryo fibroblasts passage 6). No reactivity is observed in lysates from NIH3T3 cells, which lack the Arf gene. Approximately 50 µg of cell lysate was loaded on a SDS-PAGE gel, blotted onto a PVDF membrane and probed with 1.0 mg/ml of rat-anti-p19Arf antibody (both clones 5-C3-1 and 12-A1-1 are shown). The blot was visualized using HRP conjugated Gt-anti-Rat IgG followed by ECL reagent. (See Bertwistle et al. 2004 for details.)



Immunofluorescence Microscopy

Immunofluorescence microscopy using Rockland's Protein G Purified Rat Monoclonal Anti-p19Arf antibody to detect endogenous mouse p19Arf protein present in sections of testis from a wild type mouse at stage P11, probed with 5-C3 -1 MAb (green). The section was also incubated with DAPI, to show positions of nuclei (blue). A similar section from the testis of an Arf ^{-/-} mutant mouse does not stain with this MAb (data not shown). Tissue was perfused with 4% paraformaldehyde in PBS. Slides were placed in a jar containing citrate buffer at pH 6.0 at 96° C for 30 min followed by blocking in 10% normal goat serum in 0.1% Triton X-100-PBS for 30 min. Slides were incubated with 5 ug/ml antibody at 4° C overnight followed by additional of fluorochrome conjugated secondary antibody. See Bertwistle et al. 2004 for additional details.

References

- Michalak et al. Canonical PRC2 function is essential for mammary gland development and affects chromatin compaction in mammary organoids. *PLOS Biology* (2018)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.