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Datasheet for 200-501-892

p19Arf Antibody

Overview

Description:	Anti-p19Arf (exon 1b) (RAT) Monoclonal Antibody - 200-501-892
Item No.:	200-501-892
Size:	100 µg
Applications:	ELISA, 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:	12.A1.1
Format:	IgG2b

Target Details

Gene Name:	Cdkn2a

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 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 54-62 of mouse p19Arf. BLAST analysis indicates that no significant sequence homology exists for this sequence with p19Arf homologues from other sources. This epitope is also found on mouse p16Ink4a protein. 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, WB
Application Note:	This antibody has been tested for use in ELISA, western blotting 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
IP:	1:100
WB:	1:500 - 1:2,000

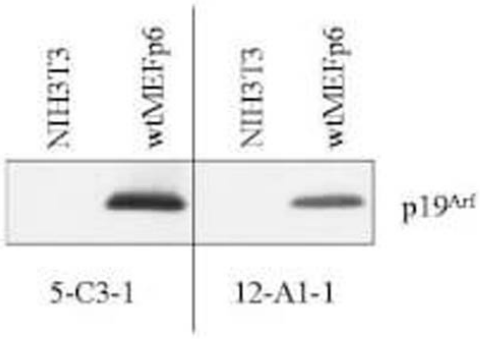
Formulation

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
Western blot analysis is shown using Rockland's Protein G Purified Rat Monoclonal Anti-p19Arf antibody (12-A1-1) 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.)

Western Blot
Western blot analysis is shown using Rockland's Protein A Purified Rat Monoclonal Anti-p19Arf antibody to detect mouse p19Arf protein present in p19Arf transformed NIH-3T3 cells. Approximately 30 µg of cell lysate was loaded on a 4-12% NuPage SDS-PAGE gel using MES buffer. The blot was incubated with a 1:1,000 dilution of the antibody at room temperature followed by washing. A 1:20,000 dilution of HRP conjugated Gt-anti-Mouse IgG preceded color development using Pierce Chemical's SuperSignal substrate. Comparison to a molecular weight marker (not shown) indicates a single band of ~96.0 kDa corresponding to the expected molecular weight for human PMS2 protein. Other detection systems will yield similar results. (See Bertwistle et al. 2004 for details).

References

- Paulson QX et al. E2F3a stimulates proliferation, p53-independent apoptosis and carcinogenesis in a transgenic mouse model. *Cell Cycle* (2006)

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