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CDKN2A/p19ARF Rabbit pAb

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Catalog # AP52221

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P51480
Reactivity	Rat
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	17941
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse CDKN2A/p19ARF
Epitope Specificity	65-169/169
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus.
DISEASE	Note=The association between cutaneous and uveal melanomas in some families suggests that mutations in CDKN2A may account for a proportion of uveal melanomas. However, CDKN2A mutations are rarely found in uveal melanoma patients. Defects in CDKN2A are the cause of cutaneous malignant melanoma type 2 (CMM2) [MIM:155601]. Malignant melanoma is a malignant neoplasm of melanocytes, arising de novo or from a pre-existing benign nevus, which occurs most often in the skin but also may involve other sites. Defects in CDKN2A are the cause of familial atypical multiple mole melanoma-pancreatic carcinoma syndrome (FAMMMPC) [MIM:606719]. Defects in CDKN2A are a cause of Li-Fraumeni syndrome (LFS) [MIM:151623]. LFS is a highly penetrant familial cancer phenotype usually associated with inherited mutations in TP53. [DISEASE] Defects in CDKN2A are the cause of melanoma-astrocytoma syndrome (MASTS) [MIM:155755]. The melanoma-astrocytoma syndrome is characterized by a dual predisposition to melanoma and neural system tumors, commonly astrocytoma.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene generates several transcript variants which differ in their first exons. At least three alternatively spliced variants encoding distinct proteins have been reported, two of which encode structurally related isoforms known to function as inhibitors of CDK4 kinase. The remaining transcript includes an alternate first exon located 20 Kb upstream of the remainder of the gene; this transcript contains an alternate open reading frame (ARF) that specifies a protein which is structurally unrelated to the products of the other variants. This ARF product functions as a stabilizer of the tumor suppressor protein p53 as it can interact with, and sequester, the E3 ubiquitin-protein ligase MDM2, a protein responsible for the degradation of p53. In spite of the structural and functional differences, the CDK inhibitor isoforms and the ARF product encoded by this gene, through the regulatory roles of CDK4 and p53 in cell

cycle G1 progression, share a common functionality in cell cycle G1 control. This gene is frequently mutated or deleted in a wide variety of tumors, and is known to be an important tumor suppressor gene. [provided by RefSeq, Sep 2012].

Additional Information

Gene ID	12578
Other Names	Cyclin-dependent kinase inhibitor 2A {ECO:0000312|MGI:MGI:104738}, Cyclin-dependent kinase 4 inhibitor A, CDK4I, p16-INK4a, p16-INK4, Cdkn2a {ECO:0000312|MGI:MGI:104738}, P16ink4a
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Cdkn2a {ECO:0000312|MGI:MGI:104738}
Synonyms	P16ink4a
Function	Acts as a negative regulator of the proliferation of normal cells by interacting strongly with CDK4 and CDK6. This inhibits their ability to interact with cyclins D and to phosphorylate the retinoblastoma protein.
Cellular Location	Cytoplasm. Nucleus.

Background

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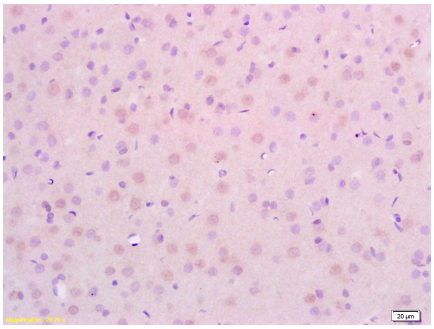
References

Quelle D.E.,et al.Oncogene 11:635-645(1995).
Zhang S.,et al.Proc. Natl. Acad. Sci. U.S.A. 95:2429-2434(1998).
Gong Z.,et al.Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
Carninci P.,et al.Science 309:1559-1563(2005).
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).

Images

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal



goat serum,C-0005) at 37鈩?? for 20 min; Incubation: Anti-CD2A2 Polyclonal Antibody, Unconjugated(AP52221) 1:200, overnight at 4掳C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.