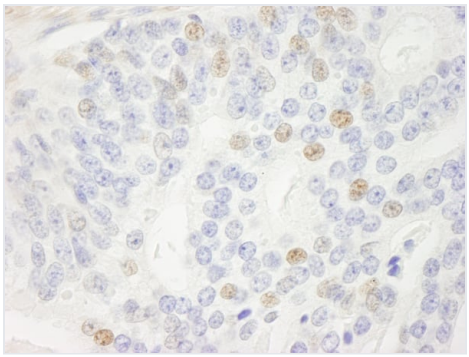
# p14ARF Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | p14ARF, Polyclonal Antibody |
| **Full Product Name** | Rabbit anti-p14ARF IHC Antibody, Affinity Purified |
| **Product Gene Name** | anti-p14ARF antibody |
| **Product Synonym Gene Name** | CDKN2A |
| **Product Synonym Names** | P16-INK4A; multiple tumor suppressor 1; P14ARF; P16; P16INK4; MTS1; P16INK4A; MTS-1; P19; P19ARF; TP16; p16-INK4; ARF; P14; alternative reading frame; MLM; CDK4 inhibitor p16-INK4; CDK4I; CDKN2; CMM2; cyclin-dependent kinase 4 inhibitor A; cyclin-dependent kinase inhibitor 2A; cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4); INK4; INK4A; cell cycle negative regulator beta; Cyclin-dependent kinase inhibitor 2A; cyclin dependent kinase inhibitor 2A |
| **Clonality** | Polyclonal |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Liquid. Whole IgG. Tris-buffered Saline containing 0.1% BSA and 0.09% Sodium Azide |
| **Purity/Purification** | Antigen Affinity Purified |
| **Concentration** | 250ug/ml (lot specific) |
| **Preparation and Storage** | Store at 2-8 degree C<br>Shelf Life: 1 year from date of receipt |
| **Molecular Weight** | 8,731 Da |
| **OMIM** | 600160 |
| **3D Structure** | ModBase 3D Structure for Q8N726 |
| **Predicted Reactivity** | Orangutan, White-tufted-ear marmoset |
| **Immunogen** | Between 82 and C-terminus |
| **Conjugation** | Unconjugated |
| **Product Categories/Family for anti-p14ARF antibody** | Primary Antibodies |
| **Applications Tested/Suitable for anti-p14ARF antibody** | Immunohistochemistry (IHC) |
| **Application Notes for anti-p14ARF antibody** | IHC: 1:100-1:500 |
| **Related Product Information for anti-p14ARF antibody** | p14ARF regulates the cell cycle by inhibiting mdm2 and stabilizing p53 leading to inactivation of cyclin/CDK complexes. p14ARF is transcribed from an alternate open reading frame (ARF) of the CDKN2A gene. CDKN2A is frequently mutated or deleted in a wide variety of tumors and is known to be an important tumor suppressor gene. The CDKN2A gene also generates a distinct transcript variant and protein p16INK4a. |
| **Other Notes** | Small volumes of anti-p14ARF antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for p14ARF purchase** | MBS3907537 is an antibody targeting p14ARF. Also known as Rabbit anti-p14ARF IHC Antibody, Affinity Purified. Reactive in Human. Host: Rabbit. |



**Immunohistochemistry (IHC) of anti-p14ARF antibody**
Detection of human p14ARF by immunohistochemistry. Sample: FFPE section of human prostate adenocarcinoma. Antibody: Affinity purified rabbit anti-p14ARF (Cat. No. MBS3907537) used at a dilution of 1:250. Detection: DAB

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for p14ARF. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 98985804 |
| **NCBI GeneID** | 1029 |
| **NCBI Accession #** | NP_478104.2 |
| **UniProt Primary Accession #** | Q8N726 |
| **UniProt Secondary Accession #** | O95440; Q15191; Q5VVJ5; Q96B52; Q9NP05; A5X2G7; D3DRK1 |
| **UniProt Related Accession #** | P42771; Q8N726 |
| **GenBank Nucleotide #** | NM_058197.4 |
| **NCBI Official Full Name** | cyclin-dependent kinase inhibitor 2A isoform p12 |
| **NCBI Official Synonym Full Names** | cyclin-dependent kinase inhibitor 2A |
| **NCBI Official Symbol** | CDKN2A |
| **NCBI Official Synonym Symbols** | ARF; MLM; P14; P16; P19; CMM2; INK4; MTS1; TP16; CDK4I; CDKN2; INK4A; MTS-1; P14ARF; P19ARF; P16INK4; P16INK4A; P16-INK4A |
| **UniProt Protein Name** | Cyclin-dependent kinase inhibitor 2A, isoform 4 |
| **UniProt Synonym Protein Names** | p14ARF; p19ARF |
| **Protein Family** | Tumor suppressor |
| **UniProt Gene Name** | CDKN2A |
| **UniProt Synonym Gene Names** | CDKN2; MLM |
| **UniProt Entry Name** | CD2A2_HUMAN |
| **NCBI Protein Information** | cyclin-dependent kinase inhibitor 2A; CDK4 inhibitor p16-INK4; CDKN2A; cell cycle negative regulator beta; cyclin-dependent kinase 4 inhibitor A; cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4); multiple tumor suppressor 1 |

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| **NCBI Summary for p14ARF** | 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] |
| **UniProt Comments for p14ARF** | p16-INK4A iso4: a cell-cycle regulatory protein that interacts with CDK4 and CDK6, inhibiting their ability to interact with cyclins D. Inhibits the phosphorylation of the retinoblastoma protein by CDK4 or CDK6, and entry into the S phase of the cell cycle. The p16INK4A and p14ARF proteins are encoded by CDKN2A, a known tumour suppressor gene in multiple cancers. CDKN2A is inactivated in 72% of cases of lung squamous cell carcinoma: 21% by epigenetic silencing by methylation, 18% inactivating mutation, 4% by exon 1b skipping, and 29% by homozygous deletion. Defects in CDKN2A are the cause of familial atypical multiple mole melanoma-pancreatic carcinoma syndrome, Li-Fraumeni syndrome, and the melanoma-astrocytoma syndrome. The melanoma-astrocytoma syndrome is characterized by a dual predisposition to melanoma and neural system tumors, commonly astrocytoma. Four alternatively spliced p16 isoforms have been reported. Two alternatively spliced isoforms of ARF have been reported.<br><br>Protein type: Nucleolus; Cell cycle regulation; Tumor suppressor<br><br>Chromosomal Location of Human Ortholog: 9p21<br><br>Cellular Component: nucleoplasm; nuclear body; protein complex; mitochondrion; cytoplasm; nucleolus; nucleus; cytosol<br><br>Molecular Function: cyclin-dependent protein kinase inhibitor activity; NF-kappaB binding; protein binding; DNA binding; p53 binding; ubiquitin-protein ligase inhibitor activity; transcription factor binding; protein kinase binding<br><br>Biological Process: protein polyubiquitination; positive regulation of apoptosis; positive regulation of transcription, DNA-dependent; regulation of protein stability; negative regulation of B cell proliferation; regulation of protein export from nucleus; negative regulation of cell proliferation; apoptotic mitochondrial changes; regulation of G2/M transition of mitotic cell cycle; somatic stem cell division; cell cycle arrest; negative regulation of immature T cell proliferation in the thymus; caspase activation; protein destabilization; transcription, DNA-dependent; protein stabilization; negative regulation of cyclin-dependent protein kinase activity; negative regulation of cell-matrix adhesion; positive regulation of protein sumoylation; inhibition of NF-kappaB transcription factor; Ras protein signal transduction; negative regulation of ubiquitin-protein ligase activity; negative regulation of protein kinase activity; negative regulation of phosphorylation; positive regulation of transcription from RNA polymerase II promoter; mitotic cell cycle; negative regulation of cell growth; positive regulation of DNA damage response, signal transduction by p53 class mediator; negative regulation of transcription, DNA-dependent; rRNA processing; G1/S transition of mitotic cell cycle<br><br>Disease: Melanoma-astrocytoma Syndrome; Melanoma, Cutaneous Malignant, Susceptibility To, 2; Li-fraumeni Syndrome 1; Melanoma-pancreatic Cancer Syndrome |
| **Research Articles on p14ARF** | **1.** Our findings suggest that p16 expression could not be used as a helpful marker for detection of development toward malignancy in oral lichen planus samples. |
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