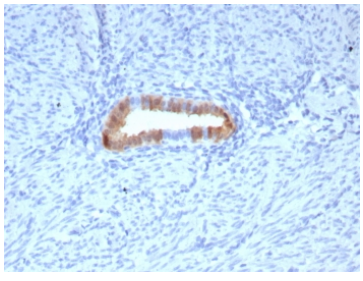
P16INK4a Antibody Recombinant Mouse MAb / CDKN2A [clone rCDKN2A/8062] (V5278)

Catalog No.	Formulation	Size
V5278-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5278-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5278SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

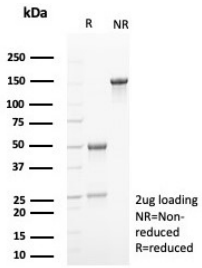
Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rCDKN2A/8062
Purity	Protein A/G affinity
UniProt	P42771
Localization	Nucleus, Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This P16INK4a antibody is available for research use only.



P16INK4a Antibody HeLa WB. Western blot analysis of Cyclin-dependent kinase inhibitor 2A (p16INK4a) expression in HeLa cell lysate using P16INK4a antibody clone rCDKN2/8062. Lane 1: HeLa cell lysate. A band is detected at approximately 15â€“17 kDa, consistent with the predicted molecular weight of p16INK4a, a cyclin-dependent kinase inhibitor that regulates G1 cell cycle progression through inhibition of CDK4 and CDK6. The clear signal supports the use of this clone for western blot analysis of proliferating cell lines.



SDS-PAGE analysis of purified, BSA-free P16INK4a antibody (clone rCDKN2A/8062) as confirmation of integrity and purity.

Description

P16INK4a antibody recognizes Cyclin-dependent kinase inhibitor 2A, the tumor suppressor protein encoded by the CDKN2A gene located on chromosome 9p21.3. P16INK4a Antibody Recombinant Mouse MAb is designed for detection of this critical cell cycle regulator in research applications involving normal and neoplastic tissues. P16INK4a localizes predominantly to the nucleus, with additional cytoplasmic distribution, where it binds CDK4 and CDK6 to prevent phosphorylation of the retinoblastoma protein and block progression from G1 to S phase.

CDKN2A antibody, also referred to as P16 antibody and INK4a antibody in the literature, targets a key checkpoint protein within the RB pathway. The CDKN2A locus is complex and encodes multiple products through alternative reading frames, including P14ARF, but P16INK4a specifically inhibits cyclin D-CDK4 and cyclin D-CDK6 complexes. Loss of CDKN2A through deletion, mutation, or epigenetic silencing is among the most common molecular events in human malignancies and contributes directly to uncontrolled cellular proliferation.

In physiologic settings, P16INK4a expression is low in most proliferating tissues but increases during cellular senescence or in response to oncogenic stress. Overexpression is frequently observed in high-risk human papillomavirus-associated lesions, including cervical and other anogenital carcinomas, where viral inactivation of RB leads to compensatory upregulation of P16. As a result, P16INK4a antibody is widely used in studies examining viral oncogenesis, cell cycle dysregulation, and tumor suppressor pathway alterations.

Structurally, P16INK4a contains multiple ankyrin repeat domains that mediate binding to CDK4 and CDK6. By maintaining RB in a hypophosphorylated state, P16INK4a enforces growth arrest and prevents inappropriate S phase entry. Disruption of this regulatory axis is implicated in melanoma, pancreatic carcinoma, glioma, bladder carcinoma, and additional tumor types.

The recombinant mouse monoclonal clone rCDKN2A/8062 provides specific detection of P16INK4a in formalin-fixed tissues and cell-based systems. Visualization of nuclear and cytoplasmic staining patterns supports evaluation of CDKN2A expression status and cell cycle checkpoint integrity in research applications from NSJ Bioreagents.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the P16INK4a antibody recombinant mouse mAb should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-100) from the human protein was used as the immunogen for the P16INK4a antibody recombinant mouse mAb.

Storage

Aliquot the P16INK4a antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.