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MLM Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP12880b

Specification

MLM Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q8N726

MLM Antibody (C-term) Blocking peptide - Additional Information

Gene ID 1029

Other Names
Cyclin-dependent kinase inhibitor 2A, isoform 4, p14ARF, p19ARF, CDKN2A {ECO:0000312|EMBL:AAM779191}, CDKN2, MLM

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MLM Antibody (C-term) Blocking peptide - Protein Information

Name CDKN2A {ECO:0000312|EMBL:AAM77919.1, ECO:0000312|HGNC:HGNC:1787}

Function
Capable of inducing cell cycle arrest in G1 and G2 phases. Acts as a tumor suppressor. Binds to MDM2 and blocks its nucleocytoplasmic shuttling by sequestering it in the nucleolus. This inhibits the oncogenic action of MDM2 by blocking MDM2-induced degradation of p53 and enhancing p53-dependent transactivation and apoptosis. Also induces G2 arrest and apoptosis in a p53-independent manner by preventing the activation of cyclin B1/CDC2 complexes. Binds to BCL6 and down-regulates BCL6-induced transcriptional repression. Binds to E2F1 and MYC and blocks their transcriptional activator activity but has no effect on MYC transcriptional repression. Binds to TOP1/TOPOI and stimulates its activity. This complex binds to rRNA gene promoters and may play a role in rRNA transcription and/or maturation. Interacts with NPM1/B23 and promotes its polyubiquitination and degradation, thus inhibiting rRNA processing. Plays a role in inhibiting ribosome biogenesis, perhaps by binding to the nucleolar localization sequence of transcription termination factor TTF1, and thereby preventing nucleolar localization of TTF1 (By similarity). Interacts with COMMD1 and promotes its 'Lys63'-linked polyubiquitination. Interacts with UBE2I/UBC9 and enhances sumoylation of a number of its binding partners including MDM2 and E2F1. Binds to HUWE1 and represses its ubiquitin ligase activity. May play a role in controlling cell proliferation and apoptosis during mammary gland development.

Cellular Location
Nucleus, nucleolus. Nucleus, nucleoplasm

MLM Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MLM Antibody (C-term) Blocking peptide - Images

MLM Antibody (C-term) Blocking peptide - Background

This gene generates several transcript variants whichdiffer in their first exons. At least three alternatively splicedvariants encoding distinct proteins have been reported, two ofwhich encode structurally related isoforms known to function asinhibitors of CDK4 kinase. The remaining transcript includes analternate first exon located 20 Kb upstream of the remainder of thegene; this transcript contains an alternate open reading frame(ARF) that specifies a protein which is structurally unrelated tothe products of the other variants. This ARF product functions as astabilizer of the tumor suppressor protein p53 as it can interactwith, and sequester, MDM1, a protein responsible for thedegradation of p53. In spite of the structural and functionaldifferences, the CDK inhibitor isoforms and the ARF product encodedby this gene, through the regulatory roles of CDK4 and p53 in cellcycle G1 progression, share a common functionality in cell cycle G1control. This gene is frequently mutated or deleted in a widevariety of tumors, and is known to be an important tumor suppressorgene.

MLM Antibody (C-term) Blocking peptide - References

Kovacs, E., et al. Proc. Natl. Acad. Sci. U.S.A. 107(12):5429-5434(2010)Irvine, M., et al. Cell Cycle 9(4):829-839(2010)Zhang, H.J., et al. J. Cell. Biochem. 106(3):464-472(2009)Ivanchuk, S.M., et al. Cell Cycle 7(12):1836-1850(2008)Bandyopadhyay, K., et al. Biochemistry 46(49):14325-14334(2007)