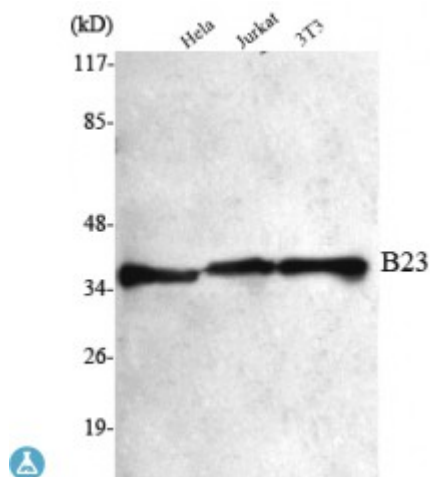


Anti-B23 antibody



Description	Mouse monoclonal to B23.
Model	STJ98470
Host	Mouse
Reactivity	Bovine, Human, Mouse, Rabbit, Rat, Swine
Applications	IF, WB
Immunogen	Purified recombinant human B23 protein fragments expressed in E.coli.
Gene ID	4869
Gene Symbol	NPM1
Dilution range	WB 1:1000-1:2000IF 1:100-1:500
Specificity	B23 Monoclonal Antibody detects endogenous levels of B23 protein.
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Nucleophosmin NPM Nucleolar phosphoprotein B23 Nucleolar protein NO38 Numatrin
Clonality	Monoclonal
Conjugation	Unconjugated
Formulation	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol.
Concentration	1 mg/ml

Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:79100MIM:164040
Alternative Names	Nucleophosmin NPM Nucleolar phosphoprotein B23 Nucleolar protein NO38 Numatrin
Function	Involved in diverse cellular processes such as ribosome biogenesis, centrosome duplication, protein chaperoning, histone assembly, cell proliferation, and regulation of tumor suppressors p53/TP53 and ARF. Binds ribosome presumably to drive ribosome nuclear export. Associated with nucleolar ribonucleoprotein structures and bind single-stranded nucleic acids. Acts as a chaperonin for the core histones H3, H2B and H4. Stimulates APEX1 endonuclease activity on apurinic/aprimidinic (AP) double-stranded DNA but inhibits APEX1 endonuclease activity on AP single-stranded RNA. May exert a control of APEX1 endonuclease activity within nucleoli devoted to repair AP on rDNA and the removal of oxidized rRNA molecules. In concert with BRCA2, regulates centrosome duplication. Regulates centriole duplication: phosphorylation by PLK2 is able to trigger centriole replication. Negatively regulates the activation of EIF2AK2/PKR and suppresses apoptosis through inhibition of EIF2AK2/PKR autophosphorylation. Antagonizes the inhibitory effect of ATF5 on cell proliferation and relieves ATF5-induced G2/M blockade . In complex with MYC enhances the transcription of MYC target genes .
Cellular Localization	Nucleus, nucleolus Nucleus, nucleoplasm Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Generally nucleolar, but is translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. Has been found in the cytoplasm in patients with primary acute myelogenous leukemia (AML), but not with secondary AML. Can shuttle between cytoplasm and nucleus. Co- localizes with the methylated form of RPS10 in the granular component (GC) region of the nucleolus. Colocalized with nucleolin and APEX1 in nucleoli. Isoform 1 of NEK2 is required for its localization to the centrosome during mitosis.
Post-translational Modifications	Acetylated at C-terminal lysine residues, thereby increasing affinity to histones. ADP-ribosylated.; Phosphorylated at Ser-4 by PLK1 and PLK2. Phosphorylation at Ser-4 by PLK2 in S phase is required for centriole duplication and is sufficient to trigger centriole replication. Phosphorylation at Ser-4 by PLK1 takes place during mitosis. Phosphorylated by CDK2 at Ser-125 and Thr-199. Phosphorylation at Thr-199 may trigger initiation of centrosome duplication. Phosphorylated by CDK1 at Thr-199, Thr-219, Thr-234 and Thr-237 during cell mitosis. When these four sites are phosphorylated, RNA-binding activity seem to be abolished. May be phosphorylated at Ser-70 by NEK2. The Thr-199 phosphorylated form has higher affinity for ROCK2. CDK6 triggers Thr-199 phosphorylation when complexed to Kaposi's sarcoma herpesvirus (KSHV) V-cyclin, leading to viral reactivation by reducing viral LANA levels. Sumoylated by ARF. May be ubiquitinated. Ubiquitination leads to proteasomal degradation.