

## Nucleophosmin/Npm1 Protein, Human (193a.a, His)

Cat. No.:	HY-P74680
Synonyms:	Npm1; Nucleophosmin; NPM; Numatrin
Species:	Human
Source:	E. coli
Accession:	P06748 (E2-L294)
Gene ID:	4869
Molecular Weight:	Approximately 34 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 30 mM Hepes, 2 mM EDTA, 0.001% Tween, 15% glycerol, pH 7.0.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Nucleophosmin/Npm1 protein stands at the crossroads of diverse cellular processes, orchestrating pivotal roles in ribosome biogenesis, centrosome duplication, protein chaperoning, histone assembly, and the intricate regulation of cell proliferation. This multifaceted protein emerges as a key player in the cellular orchestra, binding to ribosomes to facilitate their nuclear export, associating with nucleolar ribonucleoprotein structures, and interacting with single-stranded nucleic acids. Functioning as a chaperonin, Npm1 collaborates with core histones H3, H2B, and H4, and stimulates the endonuclease activity of APEX1 on double-stranded DNA while inhibiting its activity on single-stranded RNA. Beyond its involvement in nucleolar processes, Npm1 regulates centrosome and centriole duplication, counteracts apoptosis, and modulates the transcriptional activity of MYC target genes in conjunction with MYC. The intricate web of interactions involves partners such as NSUN2, SENP3, RPS10, NEK2, ROCK2, BRCA2, RPGR, CENPW, EIF2AK2/PKR, CEBPA, DDX31, NOP53, LRRC34, RRP1B, NPM3, ALKBH2, and TTF1, underscoring the complexity and versatility of Npm1 in cellular functions.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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