



Nucleotide

GenBank

Homo sapiens nucleophosmin 1 (NPM1), transcript variant 3, mRNA

NCBI Reference Sequence: NM_001037738.3

[FASTA](#) [Graphics](#)

Go to:

LOCUS	NM_001037738	1600 bp	mRNA	linear	PRI 01-JAN-2023
DEFINITION	Homo sapiens nucleophosmin 1 (NPM1), transcript variant 3, mRNA.				
ACCESSION	NM_001037738				
VERSION	NM_001037738.3				
KEYWORDS	RefSeq.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini; Catarrhini; Hominidae; Homo.				
REFERENCE	1 (bases 1 to 1600)				
AUTHORS	Florio D, La Manna S, Di Natale C, Leone M, Mercurio FA, Napolitano F, Malfitano AM and Marasco D.				
TITLE	Insights into Network of Hot Spots of Aggregation in Nucleophosmin 1				
JOURNAL	Int J Mol Sci 23 (23), 14704 (2022)				
PUBMED	36499032				
REMARK	GeneRIF: Insights into Network of Hot Spots of Aggregation in Nucleophosmin 1. Publication Status: Online-Only				
REFERENCE	2 (bases 1 to 1600)				
AUTHORS	Yener E, Ozcan K, Ongoren S, Salihoglu A, Demiroz AS and Aki H.				
TITLE	A clinicopathological experience in acute myeloid leukemia: Effects of clinical data and status of FLT3, CEBPA and NPM1 on prognosis				
JOURNAL	Indian J Pathol Microbiol 65 (3), 642-648 (2022)				
PUBMED	35900493				
REMARK	GeneRIF: A clinicopathological experience in acute myeloid leukemia: Effects of clinical data and status of FLT3, CEBPA and NPM1 on prognosis.				
REFERENCE	3 (bases 1 to 1600)				
AUTHORS	Guo CA, Su XL, Wang WJ, Xia TH, Cao XM, Yuan SB, Wang WA, Zhang A and Liu HB.				
TITLE	NPM1 is a diagnostic and prognostic biomarker associated with the clinicopathological characteristics of gastric cancer				
JOURNAL	Neoplasma 69 (4), 965-975 (2022)				
PUBMED	35723196				
REMARK	GeneRIF: NPM1 is a diagnostic and prognostic biomarker associated with the clinicopathological characteristics of gastric cancer.				
REFERENCE	4 (bases 1 to 1600)				
AUTHORS	Xu SX, Han YW, Guo JL, Bian XK, Hu HM and Lee SC.				
TITLE	The binding between NPM and H2B proteins signals for the diabetes-associated centrosome amplification				
JOURNAL	Cell Biochem Funct 40 (5), 516-525 (2022)				
PUBMED	35678289				
REMARK	GeneRIF: The binding between NPM and H2B proteins signals for the diabetes-associated centrosome amplification.				
REFERENCE	5 (bases 1 to 1600)				
AUTHORS	Xia PH, Xu ZJ, Jin Y, Ma JC, Wen XM, Yuan Q, Leng JY, Qian J and Lin J.				
TITLE	[Clinical Significance of Low Expression of LncRNA CASC15 in Acute Myeloid Leukemia with NPM1 Mutations]				
JOURNAL	Zhongguo Shi Yan Xue Ye Xue Za Zhi 30 (3), 659-670 (2022)				
PUBMED	35680788				
REMARK	GeneRIF: [Clinical Significance of Low Expression of LncRNA CASC15				

in Acute Myeloid Leukemia with NPM1 Mutations].

REFERENCE 6 (bases 1 to 1600)
AUTHORS Fankhauser C, Izaurrealde E, Adachi Y, Wingfield P and Laemmli UK.
TITLE Specific complex of human immunodeficiency virus type 1 rev and nucleolar B23 proteins: dissociation by the Rev response element
JOURNAL Mol Cell Biol 11 (5), 2567-2575 (1991)
PUBMED [2017166](#)

REFERENCE 7 (bases 1 to 1600)
AUTHORS Venkatesh LK, Mohammed S and Chinnadurai G.
TITLE Functional domains of the HIV-1 rev gene required for trans-regulation and subcellular localization
JOURNAL Virology 176 (1), 39-47 (1990)
PUBMED [2109912](#)

REFERENCE 8 (bases 1 to 1600)
AUTHORS Cochrane AW, Perkins A and Rosen CA.
TITLE Identification of sequences important in the nucleolar localization of human immunodeficiency virus Rev: relevance of nucleolar localization to function
JOURNAL J Virol 64 (2), 881-885 (1990)
PUBMED [2404140](#)

REFERENCE 9 (bases 1 to 1600)
AUTHORS Zhang XX, Thomis DC and Samuel CE.
TITLE Isolation and characterization of a molecular cDNA clone of a human mRNA from interferon-treated cells encoding nucleolar protein B23, numatrin
JOURNAL Biochem Biophys Res Commun 164 (1), 176-184 (1989)
PUBMED [2478125](#)

REFERENCE 10 (bases 1 to 1600)
AUTHORS Chan,P.K., Chan,W.Y., Yung,B.Y., Cook,R.G., Aldrich,M.B., Ku,D., Goldknopf,I.L. and Busch,H.
TITLE Amino acid sequence of a specific antigenic peptide of protein B23
JOURNAL J Biol Chem 261 (30), 14335-14341 (1986)
PUBMED [2429957](#)

COMMENT REVIEWED [REFSEQ](#): This record has been curated by NCBI staff in collaboration with Francesco Amaldi. The reference sequence was derived from [AC091980.4](#), [BC107754.1](#) and [AC093246.3](#).

On Jun 2, 2019 this sequence version replaced [NM_001037738.2](#).

Summary: The protein encoded by this gene is involved in several cellular processes, including centrosome duplication, protein chaperoning, and cell proliferation. The encoded phosphoprotein shuttles between the nucleolus, nucleus, and cytoplasm, chaperoning ribosomal proteins and core histones from the nucleus to the cytoplasm. This protein is also known to sequester the tumor suppressor ARF in the nucleolus, protecting it from degradation until it is needed. Mutations in this gene are associated with acute myeloid leukemia. Dozens of pseudogenes of this gene have been identified. [provided by RefSeq, Aug 2017].

Transcript Variant: This variant (3) utilizes an alternate 3'-terminal exon, compared to variant 1, resulting in a shorter protein (isoform 3) with a distinct C-terminus.

Publication Note: This RefSeq record includes a subset of the publications that are available for this gene. Please see the Gene record to access additional publications.

##Evidence-Data-START##
Transcript exon combination :: SRR7410570.254516.1, SRR5189667.202294.1 [ECO:0000332]
RNAseq introns :: single sample supports all introns SAMEA1965299, SAMEA1966682 [ECO:0000348]

##Evidence-Data-END##
COMPLETENESS: full length.

PRIMARY	REFSEQ_SPAN	PRIMARY_IDENTIFIER	PRIMARY_SPAN	COMP
	1-3	AC091980.4	138242-138244	
	4-1202	BC107754.1	5-1203	
	1203-1600	AC093246.3	87947-88344	c

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/chromosome="5"

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 nucleophosmin (nucleolar phosphoprotein B23, numatrin)"
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exon 770..871

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ORIGIN

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