ANP32A Protein, Human (His)

Cat. No.:	HY-P76150
Synonyms:	Acidic leucine-rich nuclear phosphoprotein 32 family member A; pp32; LANP; Mapmodulin; C15orf1; MAPM; PHAP1
Species:	Human
Source:	E. coli
Accession:	P39687 (E2-K238)
Gene ID:	8125
Molecular Weight:	Approximately 28 kDa.

PROPERTIES

AA Sequence	E M G R R I H L E L R N R T P S D V K E L V L D N S R S N E G K L E G L T D E F E E L E F L S T I N V G L T S I A N L P K L N K L K K L E L S D N R V S G G L E V L A E K C P N L T H L N L S G N K I K D L S T I E P L K K L E N L K S L D L F N C E V T N L N D Y R E N V F K L L P Q L T Y L D G Y D R D D K E A P D S D A E G Y V E G L D D E E E D E D E E E Y D E D A Q V V E D E E D E D E E E G E E E D V S G E E E E D E E G Y N D G E V D D E E D E E E L G E E E R G Q K R K
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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. 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	The ANP32A protein emerges as a multifunctional regulator involved in diverse cellular processes, encompassing tumor suppression, apoptosis, cell cycle progression, and transcription. Functionally versatile, it promotes apoptosis by facilitating the activation of caspase-9 (CASP9) and supporting apoptosome formation. Additionally, ANP32A contributes to the modulation of histone acetylation and transcription as part of the INHAT (inhibitor of histone acetyltransferases) complex. It exerts inhibitory control over EP300/CREBBP and EP300/CREBBP-associated factor by histone masking, preferentially binding to unmodified histone H3 and impeding its acetylation and phosphorylation, leading to cell growth inhibition.

Beyond chromatin dynamics, ANP32A participates in various biochemical processes, including the regulation of mRNA nuclear-to-cytoplasmic translocation and stability through its association with ELAVL1 (Hu-antigen R). The protein also plays a role in E4F1-mediated transcriptional repression and inhibits protein phosphatase 2A. Notably, ANP32A is indispensable for influenza A, B, and C viral genome replication, mediating the assembly of viral replicase asymmetric dimers and playing a crucial role in foamy virus mRNA export from the nucleus. This versatile functionality underscores the integral role of ANP32A in orchestrating multiple cellular pathways.

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