NFYA Protein, Human

Cat. No.:	HY-P71135
Synonyms:	Nuclear Transcription Factor Y Subunit Alpha; CAAT Box DNA-Binding Protein Subunit A; Nuclear Transcription Factor Y Subunit A; NF-YA; NFYA
Species:	Human
Source:	E. coli
Accession:	P23511-2 (M1-S318)
Gene ID:	4800
Molecular Weight:	40&60&70 kDa

PROPERTIES

AA Sequence	M E Q Y T A N S N S S T E Q I V V Q A G Q I Q Q Q V Q G Q P L M V Q V S G G Q L I T S T G Q P I M V Q A V P G G Q G Q T I M Q V P V S G T Q G L Q Q I Q L V P P G Q I Q I Q G G Q A V Q V Q G Q Q G Q T Q Q I I I Q Q P Q T A V T A G Q T Q T Q Q Q I A V Q G Q Q V A Q T A E G Q T I V Y Q P V N A D G T I L Q Q V T V P V S G M I T I P A A S L A G A Q I V Q T G A N T N T T S S G Q G T V T V T L P V A G N V V N S G G M V M M V P G A G S V P A I Q R I P L P G A E M L E E E P L Y V N A K Q Y H R I L K R R Q A R A K L E A E G K I P K E R R K Y L H E S R H R H A M A R K R G E G G R F F S P K E K D S P H M Q D P N Q A D E E A M T Q I I R V S
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 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 (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	NFYA protein serves as a vital component of the sequence-specific heterotrimeric transcription factor NF-Y, which specifically recognizes the 5'-CCAAT-3' box motif in the promoters of its target genes. This transcription factor, composed of NF-YA, NF-YB, and NF-YC, functions both as an activator and a repressor, depending on its interacting cofactors. NFYA, in particular, plays a role in positively regulating the transcription of the core clock component BMAL1. The formation of the

NF-Y heterotrimer requires the interaction and dimerization of NF-YB and NF-YC, enabling NF-YA association and subsequent DNA binding. NFYA also engages in interactions with SP1, and this interaction is inhibited by glycosylation of SP1. Furthermore, NFYA interacts with ZHX1 and ZHX2, specifically through its N-terminus, as well as with ZFX3. These diverse interactions emphasize the versatile regulatory role of NFYA in the complex orchestration of transcriptional processes.

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