FLAD1 Protein, Human (His-SUMO)

Cat. No.:	HY-P71616
Synonyms:	FLAD1; PP591FAD synthase; EC 2.7.7.2; FAD pyrophosphorylase; FMN adenylyltransferase; Flavin adenine dinucleotide synthase
Species:	Human
Source:	E. coli
Accession:	Q8NFF5 (1M-490T)
Gene ID:	80308
Molecular Weight:	Approximately 70.2 kDa

PROPERTIES

AA Sequence	M T S R A S E L S P G R S V T A G I I I V G D E I L K G H T Q D T N T F F L C R T L R S L G V Q V C R V S V V P D E V A T I A A E V T S F S N R F T H V L T A G G I G P T H D D V T F E A V A Q A F G D E L K P H P K L E A A T K A L G G E G W E K L S L V P S S A R L H Y G T D P C T G Q P F R F P L V S V R N V Y L F P G I P E L L R R V L E G M K G L F Q N P A V Q F H S K E L Y V A A D E A S I A P I L A E A Q A H F G R R L G L G S Y P D W G S N Y Y Q V K L T L D S E E E G P L E E C L A Y L T A R L P Q G S L V P Y M P N A V E Q A S E A V Y K L A E S G S S L G K K V A G A L Q T I E T S L A Q Y S L T Q L C V G F N G G K D C T A L L H L F H A A V Q R K L P D V P N P L Q I L Y I R S I S P F P E L E Q F L Q D T I K R Y N L Q M L E A E G S M K Q A L G E L Q A R H P Q L E A V L M G T R R T D P Y S C S L C P F S P T D P G W P A F M R I N P L L D W T Y R D I W D F L R Q L F V P Y C I L Y D R G Y T S L G S R E N T V R N P A L K C L S P G G H P T Y R P A Y L L E N E E E E R N S R T
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
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.
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	TGS1 protein serves as a pivotal catalyst in the cellular processes involving small nuclear RNAs (snRNAs) and small nucleolar RNAs (snoRNAs). It orchestrates the two consecutive methylation steps crucial for transforming the 7-monomethylguanosine (m(7)G) caps of these RNAs into a 2,2,7-trimethylguanosine (m(2,2,7)G) cap structure. This enzyme exhibits specificity for guanine, with the N7 methylation being a prerequisite for N2 methylation. Notably, hypermethylation of the m7G cap of U snRNAs induces their localization in nuclear foci, colocalization with coilin, and the formation of canonical Cajal bodies (CBs), highlighting its role in cellular regulation.

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