TRMT112 Protein, Human (His-SUMO)

Cat. No.:	HY-P71644
Synonyms:	TRMT112; AD-001; HSPC152; HSPC170; Multifunctional methyltransferase subunit TRM112-like protein; tRNA methyltransferase 112 homolog
Species:	Human
Source:	E. coli
Accession:	Q9UI30 (1M-125S)
Gene ID:	51504
Molecular Weight:	Approximately 30.2 kDa

PROPERTIES

AA Sequence	M K L L T H N L L S S H V R G V G S R G F P L R L Q A T E V R I C P V E F N P N F V A R M I P K V E W S A F L E A A D N L R L I Q V P K G P V E G Y E E N E E F L R T M H H L L L E V E V I E G T L Q C P E S G R M F P I S R G I P N M L L S E E E T E S
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	TRMT112 protein serves as an activator for a diverse range of methyltransferases involved in rRNA, tRNA, and protein modifications. Teaming up with methyltransferase BUD23, it methylates the N(7) position of a guanine in 18S rRNA, while in collaboration with N6AMT1/HEMK2, it catalyzes N5-methylation of ETF1 on 'Gln-185' and monomethylates 'Lys-12' of histone H4 (H4K12me1). Additionally, in conjunction with ALKBH8, TRMT112 participates in the methylation of 5-carboxymethyl uridine to 5-methylcarboxymethyl uridine at the wobble position of the anticodon loop in specific tRNA species. Partnering with methyltransferase THUMPD3, it contributes to the formation of N(2)-methylguanosine in various tRNA substrates. Furthermore, TRMT112, along with METTL5, plays a crucial role in methylating the 6th position of adenine in position 1832 of 18S rRNA. Its involvement in pre-rRNA processing contributes to small-subunit rRNA production, and the formation of various heterodimers with BUD23, N6AMT1/HEMK2, ALKBH8, and METTL5 highlights its diverse regulatory

	functions in various methylation pathways. Interactions with THUMPD3, THUMPD2, and TRMT11 further underscore its intricate role in these processes.

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