

EXOSC2 Protein, Human (His, Strep)

Cat. No.:	HY-P701608
Synonyms:	EXOSC2; Exosome complex component RRP4; Exosome component 2; Ribosomal RNA-processing protein 4
Species:	Human
Source:	E. coli
Accession:	Q13868 (M1-G293)
Gene ID:	23404
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

EXOSC2, a non-catalytic component of the RNA exosome complex, plays a crucial role in 3'→5' exoribonuclease activity, contributing to diverse cellular RNA processing and degradation events. Within the nucleus, the RNA exosome complex facilitates the proper maturation of stable RNA species, including rRNA, snRNA, and snoRNA, while eliminating RNA processing by-products, non-coding transcripts such as antisense RNA species, promoter-upstream transcripts (PROMPTs), and mRNAs with processing defects. This process limits their export to the cytoplasm. The RNA exosome is implicated in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM), directing AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, EXOSC2 contributes to general mRNA turnover and selectively degrades inherently unstable mRNAs with AU-rich elements (AREs) within their 3' untranslated regions, preventing the translation of aberrant mRNAs in RNA surveillance pathways. Additionally, it appears to be involved in the degradation of histone mRNA. As a component of the catalytically inactive RNA exosome core (Exo-9), EXOSC2 plays a crucial role in binding and presenting RNA for ribonucleolysis, serving as a scaffold for the association with catalytic subunits and accessory proteins or complexes. EXOSC2, as a peripheral part of the Exo-9 complex, stabilizes the hexameric ring of RNase PH domain-containing subunits, forming contacts with EXOSC4 and EXOSC7. This multifaceted interaction underscores the versatile role of EXOSC2 in RNA-related processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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