

# Product Data Sheet

## EXOSC9 Protein, Human (sf9, His)

Cat. No.:	HY-P76325
Synonyms:	Exosome complex component RRP45; Autoantigen PM/Scl 1; PM/Scl-75; PMSCL1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q06265 (M1-N439)
Gene ID:	5393
Molecular Weight:	Approximately 51.3 kDa.

DDODEDTIES	
PROPERTIES	
Appearance	Solution
Formulation	Supplied as a 0.2 $\mu m$ filtered solution of 20 mM PB, pH 7.0, 150 mM NaCl, 10% Glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	N/A.
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

EXOSC9, a non-catalytic component of the RNA exosome complex, plays a crucial role in 3'->5' exoribonuclease activity and is actively involved in numerous cellular RNA processing and degradation events. Operating within the nucleus, the RNA exosome complex contributes to the proper maturation of stable RNA species, such as rRNA, snRNA, and snoRNA. Simultaneously, it facilitates the elimination of RNA processing by-products, non-coding 'pervasive' transcripts like antisense RNA species and promoter-upstream transcripts (PROMPTs), as well as mRNAs with processing defects, thereby restricting their export to the cytoplasm. The RNA exosome's potential involvement in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM) is suggested, as it directs AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, EXOSC9, as part of the RNA exosome complex, contributes to general mRNA turnover and specifically degrades inherently unstable mRNAs containing AU-rich elements (AREs) within their 3' untranslated regions. It also participates in RNA surveillance pathways, preventing the translation of aberrant mRNAs, and appears to be implicated in the degradation of histone mRNA. The catalytically inactive RNA exosome core complex of 9 subunits (Exo-9) is proposed to play a pivotal role in binding and presenting RNA for ribonucleolysis, functioning as a scaffold for the association with catalytic subunits and accessory proteins or complexes. Notably, EXOSC9 exhibits binding affinity for AREcontaining RNAs. As a component of the RNA exosome complex, it specifically participates in the Exo-9 complex, associating with catalytic subunits EXOSC10 and DIS3 or DIS3L in cytoplasmic- and nuclear-specific RNA exosome complex forms. Interactions with SETX, particularly via its C-terminus region, have been identified, and this interaction enhances SETX

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

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