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**Product Data Sheet**

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Product Name: Cas9 mRNA (5'CAP)

Cat. No.: GM10007

**Chemical Properties**

Purity	>98%	Extinction Coefficient	
Formula		M.Wt	
Salt Form		Concentration	1mg/mL
Buffer	1 mM Sodium Citrate, pH 6.4	Storage	-40°C or below
Synonyms		Backbone	
Base Analog		Sugar Type	
Nucleotide Category			

**Background**

Cas9 mRNA (5'CAP) is produced through in vitro transcription. By simulating the mRNA processing process in eukaryotes, it has a 5' end Cap 1 cap structure and a 3' end poly(A) tail, which increases the stability and translation efficiency of the mRNA[1].

Bacteria and archaea use the CRISPR/Cas system to defend against invading viruses and plasmids. The CRISPR/Cas system works in eukaryotic systems through two molecular components: Cas9 protein and non-coding guide RNA (gRNA). Cas9 endonuclease reaches the target site under the guidance of gRNA and cuts the sequence, resulting in gene silencing.

This product should be used in conjunction with purified Guide RNA.

**References:**

[1]. Jemielity J, Fowler T, Zuberek J, et al. Novel "anti-reverse" cap analogs with superior translational properties. RNA. 2003;9(9):1108-1122.

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

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