

Cas9 mRNA expresses a version of the *Streptococcus pyogenes* SF370 Cas9 protein (CRISPR Associated Protein 9). Cas9 functions as part of the CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) genome editing system. In the CRISPR system, an RNA guide sequence targets the site of interest and the Cas9 protein is employed to perform double stranded DNA cleavage.

Cas9 mRNA encodes the Cas9 protein with an N and C terminal nuclear localization signal (NLS). The incorporation of two NLS signals within the mRNA increases the frequency of delivery to the nucleus, thus increasing the rate of DNA cleavage. Additionally, a C terminal HA epitope tag aids in detection, isolation, and purification of the Cas9 protein.

This mRNA is capped using CleanCap™, TriLink's proprietary co-transcriptional capping method, which results in the naturally occurring Cap 1 structure with high capping efficiency. It is polyadenylated, substituted with a modified uridine and optimized for mammalian systems. It mimics a fully processed mature mRNA.

L-7206-20 (20 µgrams<sup>1</sup>)  
L-7206-100 (100 µgrams)  
L-7206-1000 (1 mg)  
L-7206-BK (Bulk amount)

1.0 mg/mL 1mM Sodium Citrate (pH 6.4)  
mRNA Length: 4,521 nucleotides

Store at or below -40°C

### QC Analysis

Identity and Purity  
Agarose Gel Mobility; Pass  
Concentration: ± 6%; Pass

Product released by Quality Assurance

<sup>1</sup>A standard conversion factor of 40 µg/OD<sub>260</sub> was used to calculate quantity.

## Handling

Store at or below -40°C. Thaw and work with mRNA on ice. Upon first use, pulse spin before opening and aliquot into single use portions. Do not vortex. Use only certified RNase-free reagents and consumables with proper RNase-free technique. Use of barrier tips is recommended. Avoid freeze/thaw cycles. Do not mix with media containing serum unless first complexed with a stabilizing transfection reagent.

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The Modified Nucleic Acid Experts™

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