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Clean Cap™ Cas9 Nickase mRNA (5moU)

CRISPR Associated Nickase Protein mRNA (5-methoxyuridine)

Catalog # L-7207

Cas9 Nickase mRNA expresses a version of the *Streptococcus pyogenes* SF370 Cas9 protein (CRISPR Associated Protein 9) that and contains a D10A amino acid substitution. This mRNA also contains a C-terminal nuclear localization signal followed by a HA tag.

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 the DNA cleavage. While wild-type Cas9 creates a double stranded break at the target site, Cas9 nickase creates a single stranded break. This favors homology-directed repair and decreases the occurrence of non-homologous end joining.

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, modified with 5-methoxyuridine and optimized for mammalian systems. It mimics a fully processed mature mRNA.

L-7207-20 (20 µgrams)
L-7207-100 (100 µgrams)
L-7207-1000 (1 mg)
L-7207-BK (Bulk amount)

1.0 mg/mL in 1 mM Sodium Citrate (pH 6.4)
mRNA Length: 4,497 nucleotides

Store at or below -40°C

QC Analysis

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

Product released by Quality Assurance

[1]A standard conversion factor of 40 µg/OD $_{260}$ was used to calculate quantity.

Handling

Store at or below -40°C. Thaw and work with Cas9 Nickase 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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