

Product Data Sheet

SpCas9 mRNA (ARCA, 5mCTP, ψ UTP)

Modification:	ARCA, 5mCTP, pseudo UTP, poly A
Concentration	1 mg/ml
Buffer:	1 mM Sodium Citrate, pH 6.4
Storage:	-40°C or below
Expiration Date:	6 months

Description

SpCas9 mRNA expresses an optimized version of *Streptococcus pyogenes* protein. It can be used with a purified guideRNA sequence for genomic DNA target recognition and cleavage in the CRISPR-Cas genome editing system. Type II CRISPR-Cas system from the bacterium *S. pyogenes* has been adapted for genome engineering in eukaryotic systems, which requires two main components: the endonuclease Cas9 and non-coding guide RNA (gRNA). The Cas9 protein can be programmed with gRNA, targeting a site-specific DNA double-strand break (DSB). Our SpCas9 mRNA is provided at a concentration of 1mg/ml, it is ARCA capped, polyA-tailed and incorporated with modified nucleotides. The capping of ARCA (anti-reverse cap analog) ensures high translation efficacy, while the addition of 5mCTP/ ψ UTP and poly(A) tail reduces host cell immune response and enhance mRNA stability. Moreover, Cas9 mRNA expresses the Cas9 protein with two nuclear localization signal (NLS) and C terminal HA epitope tag that enhance the rate of DNA cleavage and facilitate downstream purification.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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