
Product Data Sheet

Product Name: Cy5 mCherry mRNA (5'CAP)

Cat. No.: GM10021

Chemical Properties

Purity	>98%	Extinction Coefficient	
Formula		M.Wt	
Salt Form		Concentration	1mg/mL
Buffer	RNase Free Water	Storage	Store at -80°C
Synonyms		Backbone	
Base Analog		Sugar Type	
Nucleotide Category			

Background

Cy5 mCherry mRNA (5'CAP) is produced through in vitro transcription. By simulating the mRNA processing process in eukaryotes, Cy5 mCherry mRNA (5'CAP) has a 5' end Cap 1 cap structure, a 3' end poly (A) tail, and Cy5-UTP modification (Cy5-UTP: UTP=3:1 (molar ratio)), which increases the stability and translation efficiency of mRNA^[1]. Cy5 is a commonly used cyanine fluorescent dye with maximum excitation/emission wavelengths of 650/670nm, capable of real-time monitoring of the transfection, localization, and expression of target proteins in cells.

Cy5 mCherry mRNA (5'CAP) can directly express proteins in the cytoplasm without relying on promoters, with a faster protein expression rate than transfected DNA. The protein expression level is directly related to the mRNA transfection level, and there is no risk of gene integration. After transfection of Cy5 mCherry mRNA (5'CAP) into cells, strong and bright red fluorescent protein mCherry can be expressed, with excitation/emission wavelengths of 587/610nm, respectively. Cy5 mCherry mRNA (5'CAP) can be used as a standard to detect the transfection efficiency of different transfection reagents, and can also be used as a control to study the transformation of fluorescent proteins in mammalian cells.

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

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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.

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