Miltenyi Biotec

StemMACS™ Lin28 mRNA
human

Order no. 130-101-117

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1. Description

Components	**20 µg StemMACS™ Lin28 mRNA** encoding the RNA-binding protein Lin28a (lin-28 homologue A; Entrez Gene ID 83557). **1 mL Double-distilled Water,** RNase-free
Specifications	*In vitro* transcribed, polyadenylated and capped mRNA that has been modified with pseudouridine and 5-methyl-cytidine to reduce the innate antiviral response to single-stranded RNA.
Formulation	Lyophilized from a filtered (0.2 µm) solution.
Storage	Store the lyophilized product at –20 °C. The expiration date is indicated on the label. After reconstitution, the product can be stored at –70 °C for up to 3 month.
Quality control	mRNA size has been verified on an Agilent Bioanalyzer System. Lin28 protein expression after transfection was confirmed by immunofluorescence.

1.1 Principle

The transient expression of key developmental regulators, recombinases or markers via mRNA transfection is a powerful tool for modulating cell fate. StemMACS mRNAs are highly pure, *in vitro*-transcribed mRNAs that have been carefully optimized and validated to ensure high level expression after transfection.

1.2 Background information

The RNA binding protein Lin28 is a conserved regulator of cell fate. In vertebrates, Lin28 promotes pluripotency and controls differentiation in diverse tissues. Lin28 can directly inhibit let-7 microRNA processing. It is highly expressed in human embryonic stem cells and has been used to enhance the generation of induced pluripotent stem cells.

1.3 Applications

- Modulation of pluripotency

2. Protocol: Reconstitution of lyophilizate

▲ RNA is susceptible to degradation by exogenous ribonucleases. Wear gloves, use RNase-free reagents, tubes, and pipette tips.

1. Dissolve StemMACS Lin28 mRNA in 200 µL of Double-distilled Water. Vortex thoroughly. The final concentration will be 0.1 µg/µL.
2. Briefly centrifuge to collect the content at the bottom of the tube.
3. Prepare aliquots and store at –70 °C to –80 °C. Do not subject aliquots to more than two freeze-thaw cycles.

For satisfactory transfection results, use a protocol that is optimized for your specific cell type. StemMACS™ eGFP mRNA or StemMACS™ Nuclear eGFP mRNA allow easy evaluation of transfection efficiency and are recommended as positive controls.

Refer to **www.miltenyibiotec.com** for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

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