



Product Specification

Product name	Lolina® Human UC-MSC heal-exo® enhancer kit 1, Xeno Free, Exo Plus
Cat.No.	NaC20120704
Storage and shipping	Store at -70 °C. Once added to medium, store at 4°C, do not refreeze after thawing. Dry ice transportation.

Product Description

Lolina® Human UC-MSC heal-exo® enhancer kit 1 is a set of sterile powders or concentrated solution which contains growth factors, hormones, or proteins for significant induction of paracrine secretion.

As an treatments additive for UC-MSC in vitro culture, this supplement has been proved has following functions:

1. It increased EV production more than fivefold and cargo protein levels in EV more than twofold compared to levels in MSC alone.
2. The contents enhanced proliferation, migration, and tube formation of human umbilical vein endothelial cells in vitro and improved skin wound healing in vivo.
3. It was neither cytotoxic nor altered the properties of MSCs, including their surface marker profile and in vitro chondrogenesis, adipogenesis, and osteogenesis.
4. It promoted the stability of MSCs and also helped stabilize the exosome membrane.

Components

Compound No.	Compounds	Format	Size
NaC20120704-A	r- human Thrombin	Lyophilized	1000 units/mg, 200 µg
NaC20120704-B	r-Human serum albumi (rHSA)	Lyophilized	62.5 mg

Instructions for Use

1. Stock solution Preparation.

One kit is for 50ml cell culture medium.

The compounds are offered as lyophilized powder, their stock solutions are prepared as follows:

- a. The compounds are offered as powder/liquid in tubes. Please centrifuge before opening the cap to ensure the accuracy of the dosage.
- b. Please carry out dissolution and packaging operations on a clean bench.
- c. Spray the medium bottle and supplement tube with 70% ethanol and wipe to remove excess liquid. In a sterile field, remove the caps without touching the interior threads with fingers.
- d. Reconstitute **NaC20120704-A** in 500 µl sterile 1 ×PBS. Aliquot into appropriate volumes of storage solution. Aliquot into appropriate volumes of storage solution. When stored at -70°C, the stock solution is stable for 6 month. When stored at 4 °C, the stock solution is stable for 1 week.
- e. Reconstitute **NaC20120704-B** in sterile 0.9% NaCl solution. The recommend volume is 5 mL. Aliquot into appropriate volumes of storage solution. When stored at 2-8 °C, -20°C, the stock solution is stable for 24 month.

2. Protocol

Step 1: UC-MSC Culture

Seeding: Seed UC-MSC in culture flasks or plates at a density allowing them to reach 70-80% confluence.

Growth: Allow UC-MSC to grow until they reach the desired confluence.

Step 2: Treatment UC-MSC with NaC20120704

Prepare Treatment Medium:

- a. Thaw the stock solution.
- b. Add the stock solution of **NaC20120704** to the regular culture medium to obtain a treatment medium. The dilution ratio is: **NaC20120704-A** 1:100; **NaC20120303-C** 1:10.

Treat UC-MSCs:

- c. Replace the regular culture medium with the treatment medium.
- d. Incubate the UC-MSCs with the treatment medium for 24 hours under standard culture conditions (37 °C, 5% CO₂).

Step 3: Post-Treatment Handling

Remove Treatment Medium: After 24 hours of treatment, remove the treatment medium.

Wash MSCs: Wash the cells gently with PBS to remove any residual the treatment medium.

Conditioning Phase:

- a. Replace with fresh, serum-free, or exosome-depleted medium.
- b. Incubate the UC-MSCs for an additional 24-48 hours to collect the conditioned medium containing exosomes.

Step 4: Exosome Isolation and Purification

Collect the conditioned medium after the post-treatment incubation period.

Note

If handled improperly, some components of the medium may present a health hazard. Take appropriate precautions when handling it, including the wearing of protective clothing and eyewear. Dispose of properly.