Cell & Gene Therapy
Regenerative Medicine

ATLANTIS BIOSCIENCE
Discovering Solutions

STEMGOLD

Product Details & Protocol

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Media that changes life.

STEMGOLD
High-Performance MSC Growth Medium kit

Serum-free, Xeno-free defined medium for human mesenchymal stem cells

PRODUCT NAME	CATALOGUE #	SIZE	COMPONENTS
STEMGOLD High-Performance MSC Growth Medium kit	AS-9008	1 Kit	• STEMGOLD Basal Medium • STEMGOLD Growth Supplements

* STEMGOLD MSC Growth Medium Kit is provided as a complete kit.

Components

PRODUCT NAME	CATALOGUE #	SIZE	STORAGE
STEMGOLD Basal Medium	AS-9007	500 mL	Store at 2 - 8°C
STEMGOLD Growth Supplements	AS-9006	25 mL	Store at -20°C

* Shelf life is 12 months from the date of manufacture.

Product Description

STEMGOLD MSC Growth Medium is a high-performance serum-free and xeno-free medium optimised for consistent and superior growth of hMSCs. It enables the maintenance of bone marrow-derived MSC (BM-hMSC), umbilical cord-derived MSC (UC-hMSC), and adipose-derived MSC (AD-hMSC), with excellent trilineage differentiation potential.

Intended Use

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

Preparation of complete STEMGOLD High-Performance MSC Growth Medium

1.Thaw STEMGOLD Growth Supplements. Mix thoroughly.

IMPORTANT NOTE: Once thawed, use immediately or aliquot unused material and store the supplements at –20°C. Avoid repeated freeze-thaw cycles.

2.Aseptically, add 25 mL of STEMGOLD Growth Supplements to 500 mL of STEMGOLD Basal Medium. Mix thoroughly.

NOTE: The complete STEMGOLD High-Performance MSC Growth Medium is stable for 1 month after preparation when stored at 2°C to 8°C.

Optional: If so desired, user may add antibiotics to the complete medium.

Recovery of cryopreserved human MSCs

The following protocol describes the recovery of cryopreserved human MSCs in a T-75 cm^2 tissue culture-treated flask. Seeding numbers and volumes vary with the sizes of the culture vessels.

1. Thaw a frozen vial of human MSCs in a 37°C water bath until its content is partially thawed.
2. Transfer the vial content into a polypropylene tube and add 9 mL of complete STEMGOLD High-Performance MSC Growth Medium dropwise.
3. Gently pipette the cells a few times to prepare a homogeneous cell suspension for counting cells.
4. Seed a T-75 cm2 tissue culture-treated flask at a density of 3 to 6 × 10^3 cells/cm2 in 10 mL of complete STEMGOLD High-Performance MSC Growth Medium.
5. After incubating cells at 37°C for overnight, aspirate spent medium and replenish the flask with 10 mL of fresh complete STEMGOLD High-Performance MSC Growth Medium.
6. Incubate cells at 37°C for 3 days to attain a confluency of 80%.

Expansion of human MSCs

The following protocol describes the recovery of cryopreserved human MSCs in a T-75 cm^2 tissue culture-treated flask. Seeding numbers and volumes vary with the sizes of the culture vessels.

1. Prior to subculturing, warm complete STEMGOLD High-Performance MSC Growth Medium to room temperature (15 – 25°C).
2. Aspirate spent medium. Wash cells once with 10 mL of DPBS (Biowest, Catalogue #L0615).
3. Detach cells by incubating cell monolayer with 3 mL of TrypLETM Express (Gibco, Catalogue #12604, or other dissociation enzymes) at 37°C for 5 minutes.
4. Wash detached cells off the tissue culture-treated surface with 7 mL of complete STEM GOLD High-Performance MSC Growth Medium and collect cells in a polypropylene tube.
5. Centrifuge the tube at 300 × g for 5 minutes.
6. Discard supernatant. Add 1 mL of complete STEMGOLD High-Performance MSC Growth Medium to the cell pellet, and gently pipette the cell pellet up and down a few times to resuspend cells.
7. Add another 4 mL of complete STEMGOLD High-Performance MSC Growth Medium to the cell suspension. Pipette up and down a few times to prepare a homogeneous cell suspension for counting cells.
8. Seed a T-75 cm2 tissue culture-treated flask at a density of 6 × 10^3 cells/cm2 (or at the desired density) in 10 mL of complete STEMGOLD High-Performance MSC Growth Medium.
9. Incubate cells at 37°C for 3 days to attain a confluency of 80%.