

MyoCult™ Expansion Kit (Human)

Expansion medium for the culture of human skeletal muscle progenitor cells (myoblasts)

Catalog #05960

500 mL



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Product Description

MyoCult™ Expansion Kit (Human) is for the culture of human skeletal muscle progenitor cells (myoblasts). MyoCult™ Expansion Medium (Basal Medium + 5X Supplement) is serum-containing and has been optimized for the expansion of human myogenic progenitor cells in vitro. Myoblasts cultured in MyoCult™ Expansion Medium can be differentiated into multinucleated myotubes using MyoCult™ Differentiation Kit (Human; Catalog #05965).

Product Information

The following components are sold as a complete kit (Catalog #05960) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
MyoCult™ Basal Medium (Human)	05961	400 mL	Store at 2 - 8°C.	Stable for 12 months from date of manufacture (MFG) on label.
MyoCult™ 5X Supplement (Human)	05962	100 mL	Store at -20°C.	Stable until expiry date (EXP) on label.

Preparation of MyoCult™ Expansion Medium (Human)

Use sterile techniques to prepare MyoCult™ Expansion Medium (Basal Medium + 5X Supplement). The following example is for preparing 500 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Thaw MyoCult™ 5X Supplement at room temperature (15 - 25°C) or at 2 - 8°C overnight. Mix thoroughly.
NOTE: Once thawed, use immediately or aliquot and store at -20°C. Do not exceed expiry date as indicated on the label. After thawing the aliquots, use immediately. Do not re-freeze.
2. Add 100 mL of 5X Supplement to 400 mL of Basal Medium. Mix thoroughly.
NOTE: If not used immediately, store MyoCult™ Expansion Medium at 2 - 8°C for up to 1 month. Do not exceed the shelf life of the individual components.

Directions for Use

Please read the entire protocol before proceeding.

The following protocol is for the expansion of human myogenic progenitor cells in a T-75 cm² flask. If using alternative cultureware, adjust volumes accordingly.

1. Resuspend 5×10^5 human myogenic progenitor cells in 12 mL of MyoCult™ Expansion Medium and add to a T-75 cm² flask.
2. Incubate at 37°C and 5% CO₂ until cells are 50 - 60% confluent. This typically takes 2 - 4 days.
NOTE: It is important that cells do not become over-confluent, as this will induce premature differentiation and cell cycle exit.
3. Passage cells as follows:
 - a. Wash cells once with 10 mL of D-PBS (Without Ca⁺⁺ and Mg⁺⁺; Catalog #37350).
 - b. Add 4 mL of Trypsin-EDTA (0.25%; Catalog #07901) and incubate at 37°C for 5 minutes. Tap the flask to detach cells.
 - c. Add 4 mL of MyoCult™ Expansion Medium and transfer cells to a 15 mL tube.
 - d. Centrifuge the tube at 300 x g for 10 minutes. Remove and discard the supernatant.
 - e. Resuspend the cell pellet in MyoCult™ Expansion Medium.
 - f. Count and plate cells at 5×10^5 cells/T-75 cm² flask or at a density of 5 - 8 x 10³ cells/cm² in cultureware of your choice.
4. Repeat steps 2 and 3 as required.

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