Skeletal Muscle Cell Growth Medium

PromoCell®

Instruction manual

Skeletal Muscle Cell Growth Medium

Product	Size	Catalog number
Skeletal Muscle Cell Growth Medium (Ready-to-use) – Includes Basal Medium and SupplementMix	500 ml	C-23060
Skeletal Muscle Cell Growth Medium Kit – Includes Basal Medium and SupplementPack	500 ml	C-23160
Skeletal Muscle Cell Basal Medium	500 ml	C-23260
Skeletal Muscle Cell Basal Medium, phenol red-free	500 ml	C-23265
Skeletal Muscle Cell Growth Medium SupplementMix	for 500 ml	C-39365
Skeletal Muscle Cell Growth Medium SupplementPack	for 500 ml	C-39360

Skeletal Muscle Cell Differentiation Medium

Product	Size	Catalog number
Skeletal Muscle Cell Differentiation Medium (Ready-to-use) – Includes Basal Medium and SupplementMix	500 ml	C-23061
Skeletal Muscle Cell Differentiation Medium SupplementMix	for 500 ml	C-39366

Recommended for

- Human Skeletal Muscle Cells (SkMC)

Product description

Our Skeletal Muscle Cell Growth Medium is a low-serum medium developed for the expansion of human skeletal muscle cell cultures. The Skeletal Muscle Cell Differentiation Medium is a serum-free medium developed to induce the fusion of skeletal muscle cells to myotubes with typical multinucleated syncytia. The media are optimized for primary human cells, but can also be used for murine, rat, canine, and rabbit skeletal muscle cells. Our Skeletal Muscle Cell Media are available as medium (Ready-to-use) or as Medium Kit.

The medium (Ready-to-use) consists of a 500 ml bottle of basal medium and one vial of SupplementMix. The Medium Kit consists of a 500 ml bottle of basal medium and the SupplementPack (a set of individual vials with pre-measured supplements) allowing the user full control over the media formulation. Adding the Supplements to the basal medium results in the complete Growth or Differentiation Medium, respectively. Basal medium (with or without phenol red) as well as SupplementMix (Growth and Differentiation Medium) and SupplementPack (Growth Medium) can also be purchased separately.

Supplementation details

The Skeletal Muscle Cell Growth Medium contains all the growth factors and supplements necessary for the optimal growth of human skeletal muscle cells, e.g. Epidermal Growth Factor, basic Fibroblast Growth Factor, and Insulin (for details see table on page 2). Our Skeletal Muscle Cell Differentiation Medium is a serum-free medium containing Insulin. The Skeletal Muscle Cell Media do not contain antibiotics or antimycotics and are formulated for use in an incubator with an atmosphere of 5% CO_2.

Preparation of the supplemented medium for use

Thaw the SupplementMix or SupplementPack at 15–25°C. Aseptically mix the supplement solutions by carefully pipetting up and down. Then, transfer the entire content of each supplement to the basal medium. Close the bottle and swirl gently until a homogenous mixture is formed.

Instructions for use of PromoCell Skeletal Muscle Cell Differentiation Medium

For differentiating human skeletal muscle cells (SkMC), the cells should be cultured in Skeletal Muscle Cell Growth Medium until they reach approximately 60–80% confluence. Replace the Growth Medium with Skeletal Muscle Cell

Differentiation Medium. After 2–8 days, extensive formation of multinucleated syncytia can be observed.

For a stable differentiation of SkMC switch back to Skeletal Muscle Cell Growth Medium after 5 days of incubation in Skeletal Muscle Differentiation Medium.

Note: Differentiation is most effective when the cells are used at a low passage number, ideally at passage 2.

Storage and stability

Store the basal medium at 4–8°C in the dark and the SupplementMix or SupplementPack at -20°C immediately after arrival. Do not freeze the basal medium. If stored properly, the products are stable until the expiry date stated on the label. After the supplements are added to the basal medium, store at 4–8°C and use within 6 weeks. Do not freeze the complete medium.

For use, pre-warm only an aliquot of the complete medium and keep the remaining medium refrigerated at 4–8°C

Quality control

All lots of PromoCell Skeletal Muscle Cell Growth Media are subjected to comprehensive quality control tests using human primary SkMC. Each lot is checked for growth promoting activity. Additionally, our Skeletal Muscle Cell Differentiation Medium is tested for the capacity to fullly induce the differentiation of SkMC. Each lot is checked for the absence of microbial contaminants (fungi and bacteria).

Intended use

The products are for *in vitro* use only and not for diagnostic or therapeutic procedures. For safety precautions please see appropriate MSDS.

Note: Due to their low serum content or the absence of serum, PromoCell media are not suitable for trypsin neutralization (e.g. when splitting the cells). Instead we recommend using our DetachKit (C-41200, C-41210, C-41220), which contains HEPES BSS, Trypsin/EDTA and Trypsin Neutralizing Solution.

Final supplement concentrations (after addition to the medium)	Skeletal Muscle Cell Growth Medium	Skeletal Muscle Cell Differentiation Medium
Fetal Calf Serum	0.05 ml/ml	—
Fetuin (bovine)	50 µg/ml	—
Epidermal Growth Factor (recombinant human)	10 ng/ml	—
Basic Fibroblast Growth Factor (recombinant human)	1 ng/ml	—
Insulin (recombinant human)	10 µg/ml	10 µg/ml
Dexamethasone	0.4 µg/ml	—

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