

# Human Vascular Smooth Muscle Cell Basal Medium and Smooth Muscle Growth Supplement

Catalog Number M-231-500, S-007-25

Pub. No. MAN0001601 Rev. 4.0

## Product description

Human Vascular Smooth Muscle Cell Basal Medium (formerly Medium 231) is a sterile-filtered, liquid tissue-culture medium intended for use as one component in a complete culture environment for the growth of normal human vascular smooth muscle cells. Human Vascular Smooth Muscle Cell Basal Medium contains essential and non-essential amino acids, vitamins, other organic compounds, trace minerals, and inorganic salts. This medium does not contain antibiotics, antimycotics, hormones, growth factors, or proteins. This medium is HEPES- and bicarbonate-buffered and is designed for use in an incubator with an atmosphere of 5% CO<sub>2</sub>/95% air. To support the plating and long-term proliferation of human vascular smooth muscle cells, Human Vascular Smooth Muscle Cell Basal Medium must be supplemented with Smooth Muscle Growth Supplement (SMGS) (Cat. No. [S-007-25](#)). To induce differentiation of normal human vascular smooth muscle cells, Human Vascular Smooth Muscle Cell Basal Medium must be supplemented with Smooth Muscle Differentiation Supplement (SMDS) (Cat. No. [S0085](#)).

Smooth Muscle Growth Supplement (SMGS) is a sterile-filtered, concentrated (20X) solution intended for use as one component in a complete culture environment for the growth of normal human vascular smooth muscle cells. SMGS contains fetal bovine serum (5% v/v final concentration), recombinant human basic fibroblast growth factor, recombinant human epidermal growth factor, and recombinant human insulin-like growth factor-I. Each 25 mL bottle of SMGS is the correct amount of supplement for a 500 mL bottle of Human Vascular Smooth Muscle Cell Basal Medium.

SMGS is intended for use in conjunction with Human Vascular Smooth Muscle Cell Basal Medium for the routine culture of normal human vascular smooth muscle cells. When supplemented with SMGS, Human Vascular Smooth Muscle Cell Basal Medium will support the plating and proliferation of smooth muscle cells at densities between  $2.5 \times 10^3$  cells/cm<sup>2</sup> and  $1 \times 10^5$  cells/cm<sup>2</sup>.

## Contents and storage

Catalog numbers that appear as links open the web pages for those products.

Contents	Cat. No.	Amount	Storage <sup>[1]</sup>
Human Vascular Smooth Muscle Cell Basal Medium	<a href="#">M-231-500</a>	500 mL	4°C; Protect from light <sup>[2]</sup> ; Do not freeze <sup>[3]</sup>
Smooth Muscle Growth Supplement	<a href="#">S-007-25</a>	25 mL	-20°C; Store in a manual defrost freezer <sup>[4,5]</sup>

<sup>[1]</sup> When stored as indicated, all products are stable until the expiration date.

<sup>[2]</sup> Several components of these tissue culture media are light-labile. Do not expose the media to light for lengthy periods of time.

<sup>[3]</sup> If the medium is warmed prior to use, do not exceed 37°C.

<sup>[4]</sup> When stored at -20°C, the product is stable until the expiration date on the label.

<sup>[5]</sup> After long-term storage at -20°C, SMGS may contain a small amount of precipitate. This precipitate is formed from cold-insoluble material in the BPE component of the SMGS and will not affect the performance of the product.

## Thaw the Smooth Muscle Growth Supplement

To thaw, place the SMGS in a 37°C water bath or overnight at 4°C.

**Note:** If thawed in a water bath, do not leave the product at 37°C after the product has thawed.

## Prepare Human Vascular Smooth Muscle Cell Basal Medium supplemented with Smooth Muscle Growth Supplement

1. Thaw one bottle of Smooth Muscle Growth Supplement. Take one bottle of Human Vascular Smooth Muscle Cell Basal Medium from cold storage. Make sure that the caps of the vessels are tight.
2. Gently swirl the bottle of supplement. Avoid splashing the supplement into the cap of the bottle or causing the supplement to foam.

3. Wipe the outside of the containers with a disinfecting solution such as 70% ethanol or isopropanol.
4. Using sterile technique in a laminar flow culture hood, transfer the entire contents of the bottle of supplement to the bottle of Human Vascular Smooth Muscle Cell Basal Medium.
5. Tightly cap the bottle of supplemented medium, then swirl the contents to ensure a homogeneous solution. Avoid causing the medium to foam.

Once Human Vascular Smooth Muscle Cell Basal Medium has been supplemented with Smooth Muscle Growth Supplement, the supplemented medium should be stored in the dark at 4°C and should not be frozen. When stored in the dark at 4°C, the supplemented medium is stable for 1 month.



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For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](https://www.thermofisher.com/symbols-definition).

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**Revision history:** Pub. No. MAN0001601

Revision	Date	Description
4.0	14 December 2021	<ul style="list-style-type: none"><li>• Replaced "bovine insulin" with "recombinant human insulin-like growth factor-I".</li><li>• Updated to the current document template, with associated updates to trademarks, logos, licensing, and warranty.</li></ul>

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