



Product Information

Stemline[™] Keratinocyte Medium II

without L-glutamine, calcium-free, with phenol red

Product Code **S0196**

Storage Temperature 2–8 °C

Stemline[™] Keratinocyte Growth Supplement

with Bovine Pituitary Extract (BPE)

Product Code **S9945**

Storage Temperature –20 °C

Keratinocyte Medium Supplement, 100×

BPE-free, calcium-free

Product Code **K3136**

Storage Temperature –20 °C

Product Description

The structure of the epidermis involves a number of cell types, among them keratinocytes and keratinocyte stem cells. The ability to culture and manipulate primary keratinocytes in a serum-free medium is required in order to utilize the cells for therapeutic and diagnostic procedures, such as autografting and allografting to aid in wound healing, investigating the feasibility of *ex vivo* gene therapy approaches, as well as in ADME/TOX research.

The Stemline[™] Keratinocyte Medium II (Product Code S0196) has been developed for use with adult and neonatal normal human epidermal keratinocytes. It is a 1×, sterile, liquid tissue culture medium intended for use as one component in a complete culture environment for the growth of normal human epidermal keratinocytes (NHEK). The Medium is calcium-free and to fully support plating and proliferation of human keratinocytes, it must be supplemented with calcium, L-glutamine, selected hormones, and growth factors. Stemline Keratinocyte Growth Supplement (Product Code S9945) provides all of the necessary components required to facilitate the growth of NHEK. Keratinocyte Medium Supplement, 100×, BPE-Free (Product Code K3136) provides everything except calcium. This product allows adjustment of the calcium level depending on the specific use.

Components

The Stemline Keratinocyte Medium II (Product Code S0196) contains essential and non-essential amino acids, vitamins, other organic compounds, trace minerals, and inorganic salts. It does not contain antibiotics, antimycotics, hormones, growth factors, or proteins. This medium is HEPES and sodium bicarbonate buffered, and has a pH of 7.4 when equilibrated in an incubator with 5% CO₂.

The Stemline Keratinocyte Growth Supplement with BPE (Product Code S9945) is optimized for use with the Stemline Keratinocyte Medium II. After adding this supplement to the medium, the final concentration of components is as follows:

Bovine Pituitary Extract (BPE)	0.4% (v/v)
EGF, human, recombinant	0.125 ng/ml
Insulin, human	5 µg/ml
Hydrocortisone	0.33 µg/ml
Transferrin, human	10 µg/ml
Epinephrine	0.39 µg/ml
CaCl ₂	0.15 mM

The 100× Keratinocyte Medium Supplement, BPE-Free (Product Code K3136) is a proprietary formulation. Please refer to procedure for usage information.

Reagents Required But Not Provided

200 mM Ala-Gln Solution, sterile (Product Code G8541)
200 mM L-Glutamine Solution, sterile
(Product Code G7513)
L-Glutamine powder, γ -irradiated (Product Code G6392)
Calcium chloride dihydrate, powder
(Product Code C7902, for use with Keratinocyte
Medium Supplement, 100×, BPE-Free)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

1. Thaw one vial of the appropriate supplement, either the S9945 or K3136, at room temperature or in the cooler.
2. Transfer the entire contents of the vial of supplement to one 500 ml bottle of Stemline Keratinocyte Basal Medium II using sterile technique in a laminar flow hood.
3. If supplementing with S9945, then the final calcium concentration is 0.15 mM.
4. If supplementing with K3136, calcium should be added to the medium accordingly.
5. Stemline Keratinocyte Basal Medium II must also be supplemented with L-glutamine to a final concentration of 2-6 mM (Product Codes G8541 [recommended], G7513, or G6392).
6. Tightly cap the bottle of supplemented medium and swirl the contents to ensure a homogeneous solution. Avoid causing the medium to foam.

Storage/Stability

The Stemline Keratinocyte Basal Medium II is stable, when stored at 2–8 °C and protected from light, until the date indicated on the label. The supplemented medium can be stored for at least two weeks at 2–8 °C if protected from light.

Related Products

- Bovine Pituitary Extract, sterile, 14 mg/ml in PBS (Product Code P1416)
- EGF, human, recombinant, sterile lyophilized powder (Product Code E9644)
- Insulin, human, recombinant, sterile solution (Product Code I9278)
- Hydrocortisone Solution, sterile, in normal saline (Product Code H6909)
- Transferrin, human, γ -irradiated powder (Product Code T5391)
- Epinephrine, powder (Product Code E1635)

LCM,MAM 09/05-2

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.