1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Rat Keratinocyte Growth Supplement
Product Number: R131-GS
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Cell Applications, Inc.
5820 Oberlin Dr. #101
San Diego, CA 92121
USA
Telephone: 858-453-0848
Fax: 858-453-2862

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements
Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas, Sodium oxides, Calcium oxide, silicon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid breathing vapours, mist or gas.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.
8.2 Exposure controls

Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   No data available

f) Initial boiling point and boiling range
   No data available

g) Flash point
   No data available

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   No data available

k) Vapour pressure
   No data available

l) Vapour density
   No data available

m) Relative density
   No data available

n) Water solubility
   No data available
o) Partition coefficient: n-octanol/water
   no data available
p) Auto-ignition temperature
   no data available
q) Decomposition temperature
   no data available
r) Viscosity
   no data available
s) Explosive properties
   no data available
t) Oxidizing properties
   no data available

9.2 Other safety information
   no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
   no data available
10.2 Chemical stability
   Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
   no data available
10.4 Conditions to avoid
   no data available
10.5 Incompatible materials
   Strong oxidizing agents
10.6 Hazardous decomposition products
   Other decomposition products - no data available
   In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
   Acute toxicity
   no data available
   Inhalation: no data available
   Dermal: no data available
   no data available
   Skin corrosion/irritation
   no data available
   Serious eye damage/eye irritation
   no data available
   Respiratory or skin sensitisation
   no data available
   Germ cell mutagenicity
   no data available
Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence (Manganese Sulfate Monohydrate)
Stomach - Irregularities - Based on Human Evidence (Zinc sulfate heptahydrate)
Stomach - Irregularities - Based on Human Evidence (Ammonium trioxovanadate)
Stomach - Irregularities - Based on Human Evidence (Amphotericin B methyl ester)
Stomach - Irregularities - Based on Human Evidence (Nickel(II) chloride hexahydrate)
Stomach - Irregularities - Based on Human Evidence (Heparin)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available
13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
16. OTHER INFORMATION

**HMIS Rating**
- Health hazard: 0
- Chronic Health Hazard: 
- Flammability: 0
- Physical Hazard: 0

**NFPA Rating**
- Health hazard: 0
- Fire Hazard: 0
- Reactivity Hazard: 0

**Further information**
For research use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. All materials and mixtures may present unknown hazards and should be used with caution. Cell Applications, Inc. and its Affiliates shall not be held liable for any damage or loss from handling or from contact with the above products. The material in this MSDS does not constitute a warranty, express or implied, including any implied warranty.