1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Midecamycin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code</td>
<td>SC-295482</td>
</tr>
<tr>
<td>Recommended use</td>
<td>For research use only. Not intended for diagnostic or therapeutic use.</td>
</tr>
<tr>
<td>Company</td>
<td>Santa Cruz Biotechnology, Inc.</td>
</tr>
<tr>
<td>Address</td>
<td>10410 Finnell Street</td>
</tr>
<tr>
<td></td>
<td>Dallas, TX 75220</td>
</tr>
<tr>
<td></td>
<td>831.457.3800</td>
</tr>
<tr>
<td></td>
<td>800.457.3801</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:scbt@scbt.com">scbt@scbt.com</a></td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

- **Signal word**: CAUTION
- **Emergency Overview**
  - Irritating to respiratory system
  - May cause skin irritation and/or dermatitis
  - Vapors may be irritating to eyes, nose, throat, and lungs
  - Product dust may be irritating to eyes, skin and respiratory system

- **Potential health effects**
  - **Eyes**: Irritating to eyes. May cause irritation.
  - **Skin**: Irritating to skin. May cause inflammation.
  - **Inhalation**: Irritating to respiratory system. May cause irritation of respiratory tract.
  - **Ingestion**: Ingestion may cause irritation to mucous membranes.
  - **Chronic Toxicity**: Avoid repeated exposure.

- **Hazards not otherwise classified (HNOC)**: Not applicable

- **Environmental Hazard**: See Section 12: ECOLOGICAL INFORMATION.

- **NFPA**
  - Health hazards: 0
  - Flammability: 1
  - Stability: 0
  - Physical and chemical properties: -

- **HMIS**
  - Health hazards: 1
  - Flammability: 1
  - Physical hazards: 1
  - Personal protection: -

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Midecamycin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>814</td>
</tr>
<tr>
<td>Formula</td>
<td>C₄₁H₆₇NO₁₅</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

General advice
If symptoms persist, call a physician.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Remove to fresh air. If symptoms persist, call a physician. Artificial respiration and/or oxygen may be necessary. Call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

Ingestion
Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Note to physicians
Treat symptomatically.

Self-protection of the first aider
Use personal protective equipment as required.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, CO2, water spray or alcohol-resistant foam.

Specific hazards arising from the chemical
Flammable properties
Not determined.
Flash point °C
110
Hazardous combustion products
Carbon oxides. Nitrogen oxides (NOx).

Explosion data
Sensitivity to Mechanical Impact
No information available.
Sensitivity to Static Discharge
No information available.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE
Advice on safe handling
Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Handle in accordance with good industrial hygiene and safety practice. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

Storage Conditions

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls
Engineering Controls
Showers
Eyewash stations
Ventilation systems

Personal protective equipment (PPE)
Eye/face protection
Tight sealing safety goggles. Face protection shield.
Skin and Body Protection
Suitable protective clothing. Apron. Gloves made of plastic or rubber.
Respiratory protection
Ensure adequate ventilation, especially in confined areas.
General Hygiene Considerations
When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>powder</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>155 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>874 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>110 °C</td>
</tr>
<tr>
<td>Density</td>
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</tr>
<tr>
<td>Evaporation rate</td>
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</tr>
<tr>
<td>Upper flammability limits</td>
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</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition coefficient</td>
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</tr>
<tr>
<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

| Reactivity                     | Not applicable                  |
| Stability                      | Stable under recommended storage conditions. |
| Incompatible materials         | Incompatible with oxidizing agents. |
| Conditions to avoid            | Heat, flames and sparks. Extremes of temperature and direct sunlight. |
11. TOXICOLOGICAL INFORMATION

Acute toxicity
Product Information
Product does not present an acute toxicity hazard based on known or supplied information.

Chronic Toxicity
Chronic Toxicity
Avoid repeated exposure.

Target Organ Effects
None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxicity
The environmental impact of this product has not been fully investigated.

Persistence and degradability
No information available.

Bioaccumulation
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal considerations
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

14. TRANSPORT INFORMATION

DOT
Not regulated

IATA
Not regulated

IMDG
Not regulated

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists: Europe (EINECS/ELINCS/NLP); South Korea (KECL); ENCS (Japan):

- X - Listed
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard Yes
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

Mexico Regulatory Information
Mexico - Grade Slight risk, Grade 1

Canada Regulatory Information
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. OTHER INFORMATION

Revision date 15-Jun-2016
Revision note No information available
Disclaimer The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet