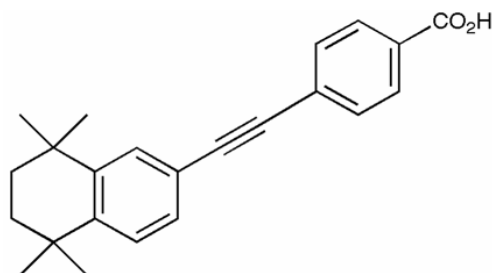


## Material Safety Data Sheet

### 1 - Identification of the substance/preparation & of the company/undertaking



Product name ec23  
Product numbers SRP001, SRP002 and SRP003  
Product use Preliminary evidence indicates that Synthetic Retinoid ec23 modulates cell differentiation through retinoid signalling pathways including activation of retinoic binding proteins

For *In vitro* R&D use only, not for diagnostic applications, not for drug or household use.

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Emergency telephone 44 (0) 1740 625 266  
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### 2 - Hazards identification

#### Classification of the substance

According to Regulation (EC) No 1272/2008  
Reproductive Toxicity (Category 1B)

#### Label Elements

Pictogram



Signal Word Danger

Hazard Statement(s)

H360 May damage fertility or the unborn child.

Precautionary Statement(s)

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P281 Use personal protective equipment as required.  
P308 + P313 IF exposed or concerned: Get medical advice / attention.  
P405 Store locked up.  
P501 Dispose of contents / container as hazardous waste.

### 3 - Composition/information on ingredients

Product name	ec23
Chemical name	4-(5,5,8,8-Tetramethyl-5,6,7,8-tetrahydronaphthalen-2-ylethynyl) benzoic acid
CAS number	104561-41-3
Classification	Health Hazard, Danger; Reproductive Toxicity Category 1B: H360

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### 4 - First aid measures

#### AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

#### AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing & shoes. Call a physician.

#### AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

#### AFTER INGESTION

If swallowed, wash out mouth with water. Do not induce vomiting. Call a physician.

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### 5 - Fire fighting measures

#### EXTINGUISHING MEDIA

Suitable: Water spray.

#### SPECIAL RISKS

Specific hazard(s): Possible emission of toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus & protective clothing to prevent contact with skin, eyes & respiratory system.

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### 6 - Accidental release measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL  
Evacuate area.

#### PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots & heavy rubber gloves.

#### METHODS FOR CLEANING UP

Gather solid material, place in a bag & hold for waste disposal. Avoid raising dust. Ventilate area & wash spill site with copious amounts of water after material pickup is complete.

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### 7 - Handling & storage

#### HANDLING

Directions for safe handling: Do not breathe dust. Avoid contact with eyes, skin & respiratory system. Avoid prolonged or repeated exposure. Due to potential for harm to the unborn child, particular care should be taken by women of child-bearing age.

#### STORAGE

Conditions of storage: Keep tightly closed when not in use. Store at or below room temperature (20°C). Store locked up.

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## 8 - Exposure controls/personal protection

### ENGINEERING CONTROLS

Safety shower & eye bath. Mechanical exhaust ventilation should be used where possible.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Do not eat or drink in the workplace.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Use respirators & components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand protection: Compatible chemical-resistant gloves.

Eye protection: Chemical safety goggles.

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## 9 - Physical & chemical properties

Formula	C <sub>23</sub> H <sub>24</sub> O <sub>2</sub>
Molecular weight	332
Physical State	Solid
Melting point range	256 - 260°C
Solubility	low water solubility

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## 10 - Stability & reactivity

Stability: Stable under normal conditions. Possible emission of toxic fumes under fire conditions.

Materials to avoid: Avoid contact with strong bases.

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## 11 - Toxicological information

### ROUTE OF EXPOSURE

Skin contact: Can cause skin irritation.

Skin absorption: May be toxic if absorbed through the skin.

Eye contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes & upper respiratory tract. May be toxic if inhaled.

Ingestion: May be toxic if swallowed.

### CHRONIC EXPOSURE - TERATOGEN

Result: Evidence suggests that 4-(5,5,8,8-Tetramethyl-5,6,7,8-tetrahydronaphthalen-2-ylethynyl) benzoic acid behaves as a synthetic derivative of all-trans-retinoic acid (ATRA), or Vitamin A, a vitamin essential to human nutrition & involved in many metabolic processes in mammals. Scientific studies on ATRA indicate dermal application of a 5 ppm medical ointment of all-trans-retinoic acid for prolonged time periods during pregnancy may cause foetal teratogenicity & this compound is expected to be at least as active. Unlike ATRA, this synthetic compound is not unstable under exposures in laboratory environments & hence, its biological activity is not expected to diminish over time.

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## 12 - Ecological information

Classification: Not known; potentially non-biodegradable.

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## 13 - Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Must be disposed of as Hazardous Waste. Dissolve or mix the material with a combustible solvent & burn in a chemical incinerator equipped with an afterburner & scrubber. Observe all federal, state & local environmental regulations.

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## 14 - Transport information

RID/ADR	Not regulated for road transport.
IMDG	Not regulated for sea transport.
IATA	Not regulated for air transport.

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## 15 - Regulatory information

### Labelling according to EC Directives

EC Label

Pictogram



Signal Word            Danger

Hazard Statement(s)

H360                    May damage fertility or the unborn child.

Precautionary Statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.
P308 + P313	IF exposed or concerned: Get medical advice / attention.
P405	Store locked up.
P501	Dispose of contents / container as hazardous waste.

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## 16 - Other Information

### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive & shall be used only as a guide. The information in this document is based on the present state of our knowledge & is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Reinnervate Limited shall not be held liable for any damage resulting from handling or from contact with the above product.

### DISCLAIMER

For *In vitro* R&D use only, not for diagnostic applications, not for drug or household use.

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