

## Chromosome Resolution Additive

Cat GGS-JL-003/a

Pack size, 1ml vial

**GTIN-13:** 5060174130069

Date of original issue: January 2012

Date of current issue: January 2015

Revision date: June 2015

## ProCell™ Reagents

Patent Pending



Health	3
Fire	0
Reactivity	0
Personal Protection	C

## PRODUCT DESCRIPTION

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**CRA (Chromosome Resolution Additive)** is a commercial formulation that consistently prevents chromosome contraction and encourages chromosome elongation by loosening the chemical bonding within the supercoiled structure of the chromosome. The result is prophase quality chromosomes. It was developed especially for tissues resistant to existing prophase techniques, such as bone marrows and solid tumors. CRA contains no ethidium bromide or thymidine.

### PROCEDURE

1. Add 0.1 ml of CRA (**working solution – see below**) to each culture containing 10ml of culture medium (see note above).
2. Incubate at 37°C for 90 mins (see note below).
3. Harvest as usual.

### NOTES :

- Lengthy exposure to Chromosome Resolution Additive can lead to a reduced mitotic index. We recommend that laboratories try the following timings:  
Start with Chromosome Resolution Additive incubation for 90 mins prior to harvest.  
This can be decreased down to 30 mins if desired.
- Chromosome Resolution Additive can be added pre or post colchicine.
- If laboratories want to leave Chromosome Resolution Additive in for much longer time periods, they should dilute (to between a quarter to an eighth) the concentration of Chromosome Resolution Additive.

### QUALITY CONTROL

Batch testing is done on cancer cell lines scoring chromosome length against a suitable control.

### STORAGE

Not for drug or other use

**CRA** is prepared in phosphate buffered saline sterile, filtered, and supplied in a stock solution consisting of a 1ml vial with a shelf-life of up to 12 months.

The stock solution should be stored in an air-tight container at 2-6°C.

Never freeze this product.

To make a working solution: dissolve 0.1ml of CRA stock in 9.9ml of injection quality water.

Only use 0.1ml of working solution per 10ml culture. Working solution must be used once made and never stored.

NOTE: Scientists can make up smaller working volumes of CRA but should always maintain the above ratio ie. 1 part CRA in 99 parts injection quality water.

## IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

**Product:** Cat# GGS-JL-003/a **Chromosome Resolution Additive (1ml vial)**

A **Laboratory Reagent** for research purposes only. **Strictly Not for Human Therapeutic Use**

### **Company details:**

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## COMPOSITION AND COMPONENT DATA

An aqueous solution containing inorganic salts, urea, cell culture medium, and commercially sensitive components.

### HAZARDS IDENTIFICATION

**WARNING: - Limited quantity of Sodium Nitrite and Magnesium Chloride**

Component	Composition	By %
<b>Sodium Nitrite</b>	NaNO <sub>2</sub>	0.0001% in Stock Solution
CAS No: 7632-00-0	-----	-----
<b>Magnesium Chloride</b>	MgCl <sub>2</sub>	2 – 5%
CAS No: 77041-1104	-----	-----

See [Regulatory Information](#) at the end of the MSDS for full R, S H, and P details.

## FIRST-AID MEASURES

### AFTER INHALATION

Remove from exposure and seek medical advice.

### AFTER EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention.

### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. If ingested - Give large quantities of water. Seek medical attention immediately.

### AFTER SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

## FIRE FIGHTING MEASURES

Not known to be flammable, but will emit toxic fumes under extreme heat.

### ACCIDENTAL RELEASE MEASURES

Wear a lab coat and rubber gloves, wipe with paper tissues and place in plastic bag for proper disposal. Wash area where spill occurs three times with water.

### HANDLING AND STORAGE

Keep container tightly closed when not in use. Store product at 4°C in a refrigerator. Correctly stored, the product is stable for up to 12 months.

## EXPOSURE CONTROL AND PERSONAL PROTECTION

Only work in a Class 2 biological safety cabinet.

Always wear a lab coat and rubber gloves. Wash hands after handling

### PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red liquid  
Boiling Point: As for water  
Vapour Pressure (pascals): As for water  
Specific Gravity: 1.2 (Water = 1)

Flashpoint: N/A

Flammability Limits (%): N/A

Incompatible with strong oxidising agents

Incompatible with acids

Incompatible with freezing.

### TOXICOLOGICAL INFORMATION

Toxic if swallowed

Severe eye irritant

Respiratory tract and skin irritant

Possible chronic, long-term exposure may act as a carcinogen

### STABILITY AND REACTIVITY

Product is stable

## ECOLOGICAL INFORMATION

### Toxicology

No data available

### Persistence and degradability

No data available

**Bioaccumulative potential**

No data available

**Other adverse effects**

Toxic/ harmful in large doses to aquatic organisms

**DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Use approved government contractor.

Observe all International, National, State and Local environmental laws.

**Contaminated packaging**

Dispose of as unused product.

**TRANSPORT INFORMATION****Limited quantities apply**

Contains: UN 1500

DOT Classification: CLASS 5.1: Oxidizing material. CLASS 6.1  
Poisonous material**REGULATORY INFORMATION****Limited quantities apply**

Contains: UN 1500

R 20/ 21/ 22 - Harmful by inhalation, skin contact and if taken by mouth

R 51 – Toxic to aquatic organisms

S 36/ 37 – Wear suitable protective clothing and gloves

S 7/ 47 – Keep container tightly closed and at temperature not exceeding 6°C

S 29/ 35 – Do not empty into drains; dispose of this material and its container in a safe way (undiluted form)

**HMIS (USA)**

- Health Hazard: 3
- Fire Hazard: 0
- Reactivity: 0
- Personal Protection: C

**National Fire Protection Association (USA)**

- Health Hazard: 3
- Flammability: 0
- Reactivity: 1
- Specific Hazard: None

**OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Genial Genetic Solutions Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.