

SAFETY DATA SHEET

Creation date: July 23, 2019 Last update date: July. 2, 2020

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product : OriCiro™ Cell-Free Cloning System 1.0
Kit Components ① 2X RA Mix
② oriC cassette
③ Control fragment
④ 10X RE Mix
⑤ 5X Buffer I
⑥ 5X Buffer II

Company Name : OriCiro Genomics, Inc.
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2. HAZARDS IDENTIFICATION

① 2X RA (Recombination Assembly) mix

GHS Categorification: Skin Corrosion / Irritation : Category 3
Eye damage/irritation : Category 2B

Hazard Symbols: Warning

Hazards Identification: H316 Causes mild skin irritation
H320 Causes eye irritation

Precautions:

[Prevention]

P264 Wash hands thoroughly after handling

[Response]

P332+P313 If skin irritation occurs: Get medical advice/attention

P337+P313 If eye irritation persists get medical advice/attention

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses if present and easy to do – continue rinsing

② 10X RE Mix

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3. COMPOSITION / INFORMATION ON INGREDIENTS

① 2X RA (Recombination Assembly) mix

Single Product/Mixture Classification: Mixture

Common/Chemical Name: trade secret

Content nondisclosure

Chemical Formula: nondisclosure

CAS Number: nondisclosure

Hazardous Ingredient: None

② oriC cassette

Single Product/Mixture Classification: Mixture

Common/Chemical Name: Tris-HCl (pH8.0)

EDTA

Content 20mM

0.1mM

Chemical Formula: Not available

Not available

CAS Number:	Not available	Not available
Hazardous Ingredient:	None	None

③ Control fragment

Single Product/Mixture Classification:	Mixture	
Common/Chemical Name:	Tris-HCl (pH8.0)	EDTA
Content	20mM	0.1mM
Chemical Formula:	Not available	Not available
CAS Number:	Not available	Not available
Hazardous Ingredient:	None	None

④ 10× RE Mix

Single Product/Mixture Classification:	Mixture
Common/Chemical Name:	trade secret
Content	nondisclosure
Chemical Formula:	nondisclosure
CAS Number:	nondisclosure
Hazardous Ingredient:	None

⑤ 5X Buffer I

Single Product/Mixture Classification:	Mixture
Common/Chemical Name:	trade secret
Content	nondisclosure
Chemical Formula:	nondisclosure
CAS Number:	nondisclosure
Hazardous Ingredient:	None

⑥ 5X Buffer II

Single Product/Mixture Classification:	Mixture
Common/Chemical Name:	Mg buffer
Content	nondisclosure
Chemical Formula:	nondisclosure
CAS Number:	nondisclosure
Hazardous Ingredient:	None

4. FIRST AID MEASURES

Necessary measures against various exposure types

Inhalation	: Remove from exposure area to fresh air immediately. Get medical attention if adverse health effects persist or are severe.
Skin Contact	: Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains. Get medical attention if adverse health effects persist or are severe.
Eye Contact	: Wash eyes immediately with large amounts of water for at least 15 minutes. Get medical attention if adverse health effects persist or are severe.
Ingestion	: Wash mouth out with water. Get medical attention if adverse health effects persist or are severe.

Most important symptoms/effects, acute and delayed

: Not available

5. FIRE FIGHTING MEASURES

Extinguishing Media : Powder, chemical foam, carbon dioxide, dry sand, water spray**Banned Extinguishing Media** : None**Specific Hazards** : In case of fire, toxic and corrosive vapors or fumes may be formed.
Wear suitable protection to avoid inhalation.**Special Fire Fighting Procedures**: Use media suitable to extinguish source of fire.
Extinguish the fire from the windward side of the fire.
Perform the proper operation to prevent dispersion of material that influences environmental conditions.**Protective Measures in Fire** : The firefighting should be done from the windward side to avoid inhalation of

toxic gas, with suitable respiratory protective device, if necessary

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Personal Protection, and Emergency Equipment

: Wear appropriate personal protective equipment. Use caution, as spill area may be slippery.

Environmental Precautions : Prevent further leakage or spillage. Do not contaminate any lakes, streams, ponds, groundwater or soil. Prevent dispersion of materials.

Methods and materials for containment and cleaning up

: Clean spill area completely with floor cloth or the like.

7. HANDLING AND STORAGE

Handling

Technical Measures : Wear proper equipment and take measures according to [8. Exposure control / Personal protection].

Local exhaust ventilation system/general ventilation : Ventilate according to [8. Exposure control / Personal protection].

Precaution : Do not leak, overflow and scatter.
Seal tightly after use.
Wash hands and face and rinse mouth thoroughly after handling.
Handle in a specially designated area where no eating or drinking is allowed.
Avoid nonessential personnel from entering the handling area.
Handle container with enough care not to damage container.
Wear proper protective clothing and shoes.
Do not release the product to the environment

Incompatible Contacts : Not available

Storage

Storage Condition : Store below -70°C

Technical Measures : None

Incompatible Materials for Storage : Not available

Material of Container : Polyethylene, polypropylene

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Biological limit values

ACGIH : Not established

JSOH : Not established

Engineering Measures : Provide local exhaust ventilation if generating vapor, dust, or mist.

Appropriate engineering controls

: Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

Personal protective equipment

Respiratory protection : Protective mask

Hand protection : Suitable impervious gloves.

Eye protection : Suitable safety glasses (goggles)

Skin protection : Protective clothing (long sleeved)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, Color etc.)

: Colorless liquid

Odor : Odorless

pH : Not available

Melting point / freezing point : Not available

Initial boiling point and boiling range

	: Not available
Flash point	: Not available
Upper/lower flammability or explosion limits	: Not available
Vapor pressure	: Not available
Relative density	: Not available
Solubility	: Miscible in water
Partition coefficient (n-octanol/water)	: Not available
Autoignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity	: Not available

10. STABILITY AND REACTIVITY

Reactivity	: Not available
Chemical stability	: Stable under proper storage condition and handling
Possibility of hazardous reactions	: Not available
Conditions to avoid	: light, Heat
Incompatibilities	: Not available
Hazardous decomposition products	: Carbon monoxide, carbon dioxide

11. TOXICOLOGICAL INFORMATION

① 2X RA mix

Acute Toxicity	: Oral [rat]	LD ₅₀ >5,000mg/kg	Not classified
	: Dermal		Not available
	: Inhalation		Not available
Skin Corrosion / Irritation	: [rabbit]	slightly irritating	Category 3
Eye Damage / Irritation	: [rabbit]	slightly irritating	Category 2B

Respiratory or Skin Sensitization

	: Respiratory	: Not available	
	Skin Sensitization : Human patch test : Negative		Not classified
Germ Cell Mutagenicity	: Not available		
Carcinogenicity	: Not available		
Toxic to Reproduction	: Not available		
Specific Target Organ Systemic Toxicity/Single Exposure	: Not available		
Specific Target Organ Systemic Toxicity/Repeated Exposure	: Not available		
Aspiration Hazard	: Not available		

② 10X RE Mix

Acute Toxicity	: Oral [rat]	LD ₅₀ >5,000mg/kg	Not classified
	: Dermal		Not available
	: Inhalation		Not available
Skin Corrosion / Irritation	: [rabbit]	slightly irritating	Category 3
Eye Damage / Irritation	: [rabbit]	slightly irritating	Category 2B

Respiratory or Skin Sensitization

	: Respiratory	: Not available	
	Skin Sensitization : Human patch test : Negative		Not classified
Germ Cell Mutagenicity	: Not available		
Carcinogenicity	: Not available		
Toxic to Reproduction	: Not available		
Specific Target Organ Systemic Toxicity/Single Exposure	: Not available		

Specific Target Organ Systemic Toxicity/Repeated Exposure

: Not available

Aspiration Hazard: Not available

12. ECOLOGICAL INFORMATION

① 2X RA Mix

Toxicity : fishes (*Oncorhynchus mykiss*): LC₅₀ > 1,000mg/L/96 h Not classified**Persistence / Degradability** : Not available**Bio accumulative potential** : Not available**Mobility in soil** : Not available**Hazard to the ozone layer** : Not available**Other hazard information** : Not available

② 10X RE Mix

Toxicity : Fish (goldfish) LC₅₀ > 5000mg/L/24h

Acute aquatic hazard : Not classified

Persistence and Degradability : Degradability : Ready biodegradability**Bio accumulative potential** : Not available

Chronic aquatic hazard is not classified as hazardous for rapid degradability potential and no bioaccumulation potential.

Mobility in soil : Not available**Hazard to the ozone layer** : Not available**Other hazard information** : Not available

13. DISPOSAL CONSIDERATIONS**Hazardous Waste** : Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Waste must be disposed of in accordance with federal, state, and local regulations.
Contact a licensed professional waste disposal service to dispose of this material if the above procedure is not operatable.**Contaminated Container and Packaging**: Retaining product residue must be completely removed before dispose.

14. TRANSPORT INFORMATION**Basic classification information for the transporting/shipment**

Land : Not Controlled under ADR/RID's regulations.

Sea : Not Controlled under IMDG's regulations.

Air : Not Controlled under IATA's regulations.

Special safety measures : Handle container with enough care not to damage container

Do not drop container or give shock/impact and avoid any damage onto container

Keep container upright and properly tighten not to fall down.

15. REGULATORY INFORMATIONFollow all the relevant local, state, and federal laws and regulations in your country.

16. OTHER INFORMATION• **Reference**

NITE Chemical Risk Information Platform (NITE-CHRIP)

https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTopSDS supplied by the supplier, etc.

The above information is believed to be correct to be the best of our knowledge and information but do not purport to

be all inclusive and shall be used only as a guide. This product is intended to be used by expert persons having chemical knowledge and skill, at their own discretion and we shall not be held liable for any damage-resulting from handling or from contact with the above material.