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The mixture is not classified as hazardous. The available Safety Data Sheet is based on the information requirement according to REACH Article 32, and therefore voluntarily created according to the Annex II of the Regulation (EC) No. 1907/2006 (REACH) in the version of the regulation (EU) 2015/830.

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

	Name:	FastGene [®] Sc	riptase II cDNA Kit			
	Cat. No.:	LS63				
	EC Substance name:	Glycerin				
	CAS Number:	56-81-5				
	EC Number:	200-289-5				
	REACH Reference Number:	not available				
1.2	Relevant identified uses of the substance or mixture and uses advised against					
	Identified uses:	Mixture of chemicals for industrial and public laboratory analysis				
		SU3: industria	l use, also refer to abbreviation in section 16.			
	Uses advised against:	Unknown.				
1.3	Details of the supplier of the safety data sheet					
	Supplier:	NIPPON GENETICS EUROPE GmbH				
		Binsfelder Straße 77				
		D- 52351 Düre	en, Germany			
		Phone.:	+49 (0) 2421 / 554960			
		Fax:	+49 (0) 2421 / 5549611			
		E-Mail:	info@nippongenetics.de			
		Internet:	www.nippongenetics.eu			
	Information on further details at:	Technical Support				
		Phone:	+49 (0) 2421 / 554960			
		Fax:	+49 (0) 2421 / 5549611			
		E-Mail:	sdb@nippongenetics.de			
1.4	Emergency telephone no:					
	Emergency information:	Phone:	+49 (0) 2421 / 554960			
		Within the bus	iness hours: Monday to Friday, 8 a.m. to 5 p.m.			

2. Hazards identification

2.1 Classification of the substance or mixture Classification according to the Regulation (EC) No. 1272/2008 (CLP); Not classified as hazardous.

2.2 Labelling elements Labelling according to the Regulation (EC) No. 1272/2008 (CLP); Not labelled as hazardous. Substance on the label: obsolete **Pictograms:** obsolete Signal word: obsolete H statements: obsolete P statements: P261 Avoid breathing mist / vapours / spray. P280 Wear protective gloves / eye protection.

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2.3 Other hazards:

On PBT or vPvB properties of the product or its ingredients according to the criteria of REACH Annex XIII no information is available.

Physical-chemical hazardous effects are unknown. On complains and symptoms as well as to harmful effects no data are available. Forms slippery/greasy layers with water.

3. Composition / information on ingredients:

3.1 Substances:

not relevant

3.2 Mixtures:

Chemical characterization:

Aqueous solution of inorganic and organic ingredients.

Chemical name	REACH Ref. No.	EC No.	Index No.	CAS No.	Content	Classification
Glycerin	not available	200-289-5	not available	56-81-5	40-55%	not classified as hazardous
Water	not available	231-791-2	not available	7732-18-5	45-60%	not classified as hazardous

4. First aid measures

4.1 Description of the first aid measures:

4.1.1 General information:

If complains persist consult a physician. Remove contaminated cloths and shoes, thoroughly clean before re-use. If complains and symptoms occur seek medical advice.

4.1.2 Inhalation:

Remove the affected person to fresh air, bring to rest position, keep warm. If complains and symptoms occur seek medical advice. CPR when there is no breathing. Provide Oxygen when breathing is difficult.

4.1.3 Skin contact:

Take medical action immediately. At contact with the skin immediately wash with much water. If complains and symptoms occur seek medical advice. Remove contaminated clothes and shoes and isolate contaminated area. Completely wash clothes and shoes before reuse

4.1.4 Eyes contact:



Take medical action immediately. Thoroughly wash the eyes on spread lids with flowing fresh water for 20 minutes, previously remove contact lenses if possible.

4.1.5 Ingestion:

Don't induce vomiting. Let rinse the mouth, let spit of the liquid and let drink copious amounts of water. Do not provide any food for unconscious person. If complains and symptoms occur seek medical advice. Do not inject adrenalin.

- **4.2 Most important symptoms and effects, both acute and delayed:** Not relevant
- **4.3** Indication of any immediate medical attention and special treatment needed: Decontamination, symptomatic treatment. No specific antidote known.

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5. Firefighting measures 5.1 Extinguishing media

Extinguishing media Suitable extinguishing media:

The product is not combustible, adapt the measures to the environment: water spray, carbon dioxide, extinguishing foam and dry extinguishing agent.

Not suitable extinguishing media for safety reasons:

High pressure water jet



5.3

Special hazards arising from the substance or mixture:

Can be ignited by heat, spark, flame. Container may explode on heating. Some can ride, but not easily ignite. May cause irritation and poisonous gas in case of fire. Inhalation of the substances may be harmful.

Advice for fire fighters:

No information available.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Mind the protection measures (section 8). Avoid the contact with skin, eyes and cloth, wear suitable protection equipment. Ensure adequate ventilation. Avoid aerosol formation. Micro particles can ignite fire or explosion, therefore remove all the sources of fire.

6.2 Environmental precautions:

Do not allow to enter sewers / surface waters / ground water. Remove fire residues and contaminated aqueous wastes in suitable containers and dispose of them in a controlled manner.

6.3 Methods and material for containment and cleaning up:

7. In case of small leakage, flush contaminated area with large amount of water or absorb with sand and noncombustible material and place in container. In case of large leakage, make a ditch away from liquid spills. Put spills into a clean, dry container with clean shovel, loosely closed, then transfer container from leak area.

7.1 Reference to other sections:

Refer to section 8 – personal protection and section 13 – information on disposal.

8. Handling and storage

8.1 Precautions for safe handling:

8.1.1 Information on safe use:

Avoid inhalation of aerosol, contact with eyes, skin and cloth, as well as longer or repeated exposure. Provide sufficient ventilation of the working room (local exhaust ventilation if needful). If workplace exposure limits are exceeded, wear appropriate respiratory protection. Wash thoroughly after handling. Do not spray to avoid fast evaporation.

8.1.2 Information on fire and explosion protection:

No special measures needful.

8.1.3 Handling rules:

On workplaces only keep available amounts necessary for work progress. Don't leave receptacles stand open. Avoid spilling, preferable handle with non-breakable receptacles or use suitable protection containers on transportation of breakable receptacles.

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8.2 Conditions for safe storage considering incompatibilities:

8.2.1 Technical measures and storage conditions:

Keep opened container tightly closed again and stored upright to prevent leakage. Always keep in containers of the same material as the original. Store in a cool, dry place.

8.2.2 Packing materials:

Packing materials must be tested for durability before use.

8.2.3 Requirements for storage rooms and containers:

Storage in passages, passages, stairs, public areas, roofs, roofs and workrooms is not permitted. Do not use food containers because of the risk of confusion. Label containers clearly and permanently. If possible, keep in the original container, keep container tightly closed.

8.2.4 Information on cumulative storage:

Storage class: non-combustible liquids.

Nothing but substances of similar properties should be cumulatively stored. Cumulative storage with substances as follows is prohibited:

- Pharmaceuticals, food and feed, including additives.

- Infectious, radioactive and explosive substances.
- Organic peroxides and very reactive oxidizing substances.

8.2.5 Further information to the storage conditions: none 8.3 Specific end uses: none

9. Exposure controls / personal protection

9.1 Control parameters:	
9.1.1 Occupational exposure limits:	TWA – 10 mg/m ³
9.1.2 Biological exposure limits:	not available
9.1.3 DNEL and PNEC values:	not available

9.2 **Exposure controls:**

9.2.1 Personal protection:

Respiratory protection:

No respiratory protection is necessary when working with the small quantities intended for the product. In case of exceptional operating conditions, working with larger quantities and with the risk of aerosol formation use suitable respiratory protection, e.g. half-masks according to EN 140 with filters according to EN 143-P1. Observe wearing time limit.

Hand protection:



At the risk of skin contact with the product, ensure adequate protection by wearing suitable protective gloves, e.g. according to EN 374. Before use, test protective gloves for suitability under the specific working conditions (e.g., mechanical resistance, product compatibility and antistatic properties). Observe the instruction and information on the use, storage, maintenance and replacement of protective gloves. Damaged and worn protective gloves should be replaced immediately.



Eye protection:

Eye protection goggles with side protection (EN 166).

Skin protection

Use clothing usal in the chemical industry. Skin protection agents are not as effective as protective gloves, so

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they should be preferred as much as possible. If no protective gloves can be worn, apply water-insoluble skin protection preparations to the clean skin before starting work and after every break. Before breaks and at the end of work, skin cleansing with soap and water is required. After cleansing, use a greasy skin care product.

Body protection:

Special body protection generally not required, normal work clothes adequate.

General protection and hygiene measure:

Do not eat, drink or smoke during working hours. Keep away from food and drink. Avoid contact with eyes and skin. Remove contaminated and soaked clothing immediately. Wash hands before breaks and after work.

9.2.2 Limitation of the environmental exposure:

Avoid leaks and spills.

9.2.3 Limitation of the consumer's exposure:

Avoid inhalation of vapors, mists or gases, remove sources of ignition.

10. Physical and chemical properties

10.1 Information on basic physical and chemical properties

10.1.1 Appearance:

Physical status:	liquid
Color:	Dark color to yellow color
Odour:	Dull

10.1.2 Fundamental data relevant for security:

Parameter	Value	Unit	Method	Remarks	
pH value at 20°C	pH 7				
Melting point/range	20	°C			
Boiling point/range	171	°C			
Flash point	160	°C			
Self-ignition temperature	370	°C			
Steam pressure at 50 C°	0,0025	mmHg			
Vapor density	3.1			Air = 1	
Bulk density	1,2613			Water = 1	
Water solubility at 20 °C	1000	g/L		unlimited	
Viscosity (at 25 °C)	954	cP			

10.2 Other information:

not relevant

11. Stability and Reactivity

11.1 Reactivity:

Not reactive under the intended use and storage conditions.

11.2 Chemical stability:

Chemically stable under the intended use and storage conditions.

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11.3 Possibility of hazardous reactions:

Unknown under the intended use and storage conditions.

11.4 Conditions to avoid:

High temperature.

12. Toxicological information

12.1 Information on toxicological effects:

Irritation, difficult to breathe, vomit, diarrhea, headache, dizziness, sleep disorders, kidney problem, paralyzed. Can be absorbed by suction. Can be absorbed by inhalation, skin and digestive system.

12.1.1 Toxicocinetics, metabolism and distribution:

No data available.

12.1.2 Acute toxicity:

Parameter	Result	Species
LD ₅₀ oral	27200 mg/kg	Rat
LD ₅₀ ingestion	>10000 mg/kg	Rat

12.1.3 Corrosive and irritation effects:

No data available.

12.1.4 Sensitizing effects:

No data available.

12.1.5 Subacute and chronic toxicity:

No data available.

12.1.6 Carcinogenicity, mutagenicity and reproduction toxicity:

Parameter	Value	Cell culture/ Species	Method	Remarks
Long exposer (Special target poison)	1-4 mg/L	Rat	inhale	Epiglottis epithelium

On the carcinogenicity and reproduction toxicity of the product and its ingredients no data are available.

12.1.7 Experience from practise:

No data available.

12.1.8 General remarks:

When handled appropriate and used as intended, the product does not cause harmful effects according to our experience and current information.

13. Ecological information

13.1 Toxicity:

Parameter	Value	Cell culture/ Species	Method	Remarks
LC50	5000 mg/L	Carassius auratus	24h exposure	
EC50	>10000 mg/L	Daphnia magna	24h Exposure	US EPA ECOTOX, EU IUCLID
LC50	77.7 g/L	Algae	96h exposure	

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13.2	Persistence and degradability:				
	Biological degradation:	63% in 14 days Fast biodegradability (OECD SICD)			
		93% biodegradability in 30 days (OECD TG 301 D)			
		(IUCLID)			
	Abiotic degradation:	No data available.			
13.3	Bio-accumulation potential:	No data available.			
13.4	Mobility in soil:				
	Absorption/Desorption:	No data available.			
13.5	Volatibility:	No data available.			
13.6	Results of the PBT and vPvB assessment:				
	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT),				
	or very persistent and very bioaccumulative (vPvB)	at levels of 0.1% or higher.			

13.7 Other adverse effects:

Ozone depletion potential and global green-house effects are not known. No expected life enrichment. No information on toxicity on aquatic organisms.

General remarks:

When handled appropriate and used as intended, the product does not cause adverse effects according to our experience and current information, but should not be discharged into large quantities into an outflow or water body.

14. Disposal considerations

14.1 Waste treatment methods:

14.1.1 Product:

The allocation of a waste code number according to the European waste catalog should be done in consultation with the regional waste disposal company. Recommendation:

AVV waste code number:	16 05 09	Other waste containing organic chemicals, e.g. lab chemicals not otherwise specified
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14.1.2 Packaging:

Residues in packages should be removed, preferably by rinsing with water, and after complete emptying in accordance with the regulations for waste disposal. Packaging which is not completely emptied must be disposed of in the form as determined by the regional waste disposal company. Recommendation:

AVV waste code number:	15 01 06	mixed packaging
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15. Transport information

	-		
15.1	UN number	:	not relevant
15.2	UN proper :	shipping name:	not relevant
15.3	Transport h	nazard class(es):	not relevant
15.4	Packaging	group:	not relevant
15.5	Environme	ntal hazards:	not relevant
15.6	Special pre	not relevant	
15.7	Transport i	not relevant	
	Remarks:	ID / ADN / IDMG-Code and	
		ICAO / IATA.	

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16. Regulatory information

- 16.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- 16.1.1 EU Regulations:
 - No information available

16.1.2 National regulations (United Kingdom):

Classification and labelling:

The product is not due to labelling according to the UK regulations.

16.2 Chemical safety assessment:

Chemical safety assessments (CSA) according to the Article 14 Paragraph 1 of the Regulation (EC) No 1907/2006 (REACH) are not available.

17. Other information

17.1 Wordings of the H-statements from the sections 2 and 3: Not available.

17.2 Training advice:

SU3:

Instruction on hazardous substances is mandatory.

17.3 Abbreviation /Explanation:

Descriptor for industrial users from ECHA Guide Chemical Safety Information Requirements R.12 https://echa.europa.eu/documents/10162/13632/information_requirements_r12_de.pdf

17.4 Recommended use restriction:

Not recommended for consumer's use.

17.5 Further information and contact points for technical information:

17.6 Data sources of the Safety Data Sheet creation:

Information on registered substances, European Chemicals Agency (ECHA); Internet: <u>http://echa.europa.eu/de</u>. Information System on Hazardous Substances of the German Social Accident Insurance (GESTIS), Internet: <u>http://www.hvbg.de/d/bia/gestis/stoffdb/index.html</u>.

17.7 Amended information and reason for amendment:

Actual version:	Version number	1.1	Date:	21-03-2018
Kind of amendent:	Complete revision according to the amended Annex II.			
Reason for amendment:	Adaption to the Annex II of the Regulation (EC) No. 1907/2006 (REACH) in the version of the Regulation (EU) 2015/830, and to the Annex I of the Regulation (EC)			
	No. 1272/2008 (CLP).			

17.8 Remarks:

This information is only intended to describe the safety requirements of the product and is based on the present state of our knowledge. They do not constitute a guarantee for the characteristics of the product described in the sense of the statutory warranty regulations. Please refer to the respective product data sheets for the delivery properties. If the product mentioned in this Material Safety Data Sheet is blended, mixed or processed with other materials, the data in this Material Safety Data Sheet may not be transferred to the new material, unless otherwise specified.

End of Material Safety Data Sheet