

SAFETY DATA SHEET



SureGuide gRNA Control Kit - 20 Reactions, Part Number 5190-7718

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : SureGuide gRNA Control Kit - 20 Reactions, Part Number 5190-7718

Part no. (chemical kit) : 5190-7718

Part no. : Control DNA Target 5190-7536
Control gRNA 5190-7539

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : ☒ Analytical reagent.
☒ Control DNA Target 2 x 0.02 ml (20 µl 50 ng/ µl)
Control gRNA 0.01 ml (10 µl 1 µM)

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Control DNA Target Mixture
Control gRNA Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

☒ Control DNA Target The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Control gRNA The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements








Signal word : ☒ Control DNA Target No signal word.
Control gRNA No signal word.

Hazard statements : ☒ Control DNA Target No known significant effects or critical hazards.
Control gRNA No known significant effects or critical hazards.



Precautionary statements

Prevention : ☒ Control DNA Target Not applicable.
Control gRNA Not applicable.

SECTION 2: Hazards identification

Response	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Storage	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Disposal	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Supplemental label elements	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Special packaging requirements		
Containers to be fitted with child-resistant fastenings	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.
Tactile warning of danger	:  Control DNA Target	Not applicable.
	Control gRNA	Not applicable.

2.3 Other hazards




Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	:  Control DNA Target	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Control gRNA	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	:  Control DNA Target	None known.
	Control gRNA	None known.

SECTION 3: Composition/information on ingredients



3.1 Substances	: Control DNA Target	Mixture
	Control gRNA	Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.





SECTION 4: First aid measures**4.1 Description of first aid measures**

Eye contact	:  Control DNA Target	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Control gRNA	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:  Control DNA Target	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Control gRNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:  Control DNA Target	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Control gRNA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.



SECTION 4: First aid measures

Ingestion	:  Control DNA Target	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Control gRNA	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	:  Control DNA Target	No action shall be taken involving any personal risk or without suitable training.
	Control gRNA	No action shall be taken involving any personal risk or without suitable training.



4.2 Most important symptoms and effects, both acute and delayedOver-exposure signs/symptoms

Eye contact	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.
Inhalation	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.
Skin contact	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.
Ingestion	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.



4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:  Control DNA Target	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Control gRNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:  Control DNA Target	No specific treatment.
	Control gRNA	No specific treatment.


SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	:  Control DNA Target	Use an extinguishing agent suitable for the surrounding fire.
	Control gRNA	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:  Control DNA Target	None known.
	Control gRNA	None known.


5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:  Control DNA Target	In a fire or if heated, a pressure increase will occur and the container may burst.
	Control gRNA	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.

5.3 Advice for firefighters



Special protective actions for fire-fighters	:  Control DNA Target	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Control gRNA	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 5: Firefighting measures


Special protective equipment for fire-fighters	:  Control DNA Target	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Control gRNA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  Control DNA Target	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Control gRNA	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	:  Control DNA Target	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Control gRNA	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

:  Control DNA Target	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Control gRNA	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).


6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: Control DNA Target	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Control gRNA	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.


6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.


SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Protective measures	: Control DNA Target	Put on appropriate personal protective equipment (see Section 8).
	Control gRNA	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  Control DNA Target	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Control gRNA	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage	:  Control DNA Target	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Control gRNA	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)


Recommendations	: Control DNA Target	Industrial applications, Professional applications.
	Control gRNA	Industrial applications, Professional applications.
Industrial sector specific solutions	:  Control DNA Target	Not available.
	Control gRNA	Not available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures	:  Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
--	---

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Control DNA Target	Liquid.
	: Control gRNA	Liquid.
Colour	: Control DNA Target	Not available.
	: Control gRNA	Not available.
Odour	: Control DNA Target	Not available.
	: Control gRNA	Not available.
Odour threshold	: Control DNA Target	Not available.
	: Control gRNA	Not available.
Melting point/freezing point	: Control DNA Target	0°C
	: Control gRNA	0°C
Initial boiling point and boiling range	: Control DNA Target	100°C
	: Control gRNA	100°C
Flammability	: Control DNA Target	Not applicable.
	: Control gRNA	Not applicable.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits : Control DNA Target Not available.
Control gRNA Not available.

Flash point : Control DNA Target Not available.
Control gRNA Not available.

Auto-ignition temperature : ☒ Not available.

Decomposition temperature : Control DNA Target Not available.
Control gRNA Not available.

pH : Control DNA Target 8
Control gRNA 7

Viscosity : Control DNA Target Not available.
Control gRNA Not available.

Solubility(ies)	Media	Result
<input checked="" type="checkbox"/> Control DNA Target	water	Soluble
<input checked="" type="checkbox"/> Control gRNA	water	Soluble

Partition coefficient: n-octanol/water : ☒ Control DNA Target Not applicable.
Control gRNA Not applicable.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
<input checked="" type="checkbox"/> Control DNA Target						
water	17.5	2.3	-	92.258	12.3	-
Control gRNA						
water	17.5	2.3	-	92.258	12.3	-

Evaporation rate : Control DNA Target Not available.
Control gRNA Not available.

Relative density : Control DNA Target Not available.
Control gRNA Not available.

Vapour density : Control DNA Target Not available.
Control gRNA Not available.

Explosive properties : Control DNA Target Not available.
Control gRNA Not available.

Oxidising properties : Control DNA Target Not available.
Control gRNA Not available.

Particle characteristics

Median particle size : ☒ Control DNA Target Not applicable.
Control gRNA Not applicable.

9.2 Other information





No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : ☒ Control DNA Target No specific test data related to reactivity available for this product or its ingredients.
Control gRNA No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : ☒ Control DNA Target The product is stable.
Control gRNA The product is stable.

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	:  Control DNA Target	Under normal conditions of storage and use, hazardous reactions will not occur.
	Control gRNA	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:  Control DNA Target	No specific data.
	Control gRNA	No specific data.
10.5 Incompatible materials	:  Control DNA Target	May react or be incompatible with oxidising materials.
	Control gRNA	May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	:  Control DNA Target	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Control gRNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**Acute toxicityAcute toxicity estimates

N/A

Irritation/Corrosion**Conclusion/Summary** : Not available.Sensitiser**Conclusion/Summary** : Not available.Mutagenicity**Conclusion/Summary** : Not available.Carcinogenicity**Conclusion/Summary** : Not available.Reproductive toxicity**Conclusion/Summary** : Not available.Teratogenicity**Conclusion/Summary** : Not available.Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Control DNA Target
Control gRNA

Not available.

Not available.

Potential acute health effects**Inhalation** :  Control DNA Target
Control gRNANo known significant effects or critical hazards.
No known significant effects or critical hazards.**Ingestion** :  Control DNA Target
Control gRNANo known significant effects or critical hazards.
No known significant effects or critical hazards.**Skin contact** :  Control DNA Target
Control gRNANo known significant effects or critical hazards.
No known significant effects or critical hazards.**Eye contact** :  Control DNA Target
Control gRNANo known significant effects or critical hazards.
No known significant effects or critical hazards.

SECTION 11: Toxicological informationSymptoms related to the physical, chemical and toxicological characteristics

Inhalation	: <input checked="" type="checkbox"/> Control DNA Target	No specific data.
	Control gRNA	No specific data.
Ingestion	: <input checked="" type="checkbox"/> Control DNA Target	No specific data.
	Control gRNA	No specific data.
Skin contact	: <input checked="" type="checkbox"/> Control DNA Target	No specific data.
	Control gRNA	No specific data.
Eye contact	: <input checked="" type="checkbox"/> Control DNA Target	No specific data.
	Control gRNA	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposureShort term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

General : ☒ Control DNA Target No known significant effects or critical hazards.
Control gRNA No known significant effects or critical hazards.

Carcinogenicity : ☒ Control DNA Target No known significant effects or critical hazards.
Control gRNA No known significant effects or critical hazards.

Mutagenicity : ☒ Control DNA Target No known significant effects or critical hazards.
Control gRNA No known significant effects or critical hazards.

Reproductive toxicity : ☒ Control DNA Target No known significant effects or critical hazards.
Control gRNA No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : ☒ No known significant effects or critical hazards.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB)/REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

SECTION 15: Regulatory information

Not listed.

Prior Informed Consent (PIC)


Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Label :  Control DNA Target Not applicable.
Control gRNA Not applicable.

Seveso Directive

 This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : All components are active or exempted.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

SECTION 16: Other information

Procedure used to derive the classification

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

Date of issue/ Date of revision : 30/06/2023

Date of previous issue : 16/06/2020

Version : 3

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.