SAFETY DATA SHEET



pDual Expression Vector - 20 micrograms, Part Number 214501

Section 1. Identification

Product identifier : pDual Expression Vector - 20 micrograms, Part Number 214501

Part no. (chemical kit) : 214501

Part no. : pDual expression vector 214501-51 XL1-Blue E. coli Strain 200268-81

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

Material uses : Analytical reagent.

pDual expression vector 0.02 ml XL1-Blue E. coli Strain 0.5 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd

679 Springvale Road

Mulgrave

Victoria 3170, Australia

1800 802 402

Emergency telephone number (with hours of

operation)

: CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.

GHS label elements

Signal word : pDual expression vector No signal word. XL1-Blue E. coli Strain No signal word.

Hazard statements : pDual expression vector No known significant effects or critical hazards.

XL1-Blue E. coli Strain No known significant effects or critical hazards.

Precautionary statements

Prevention: pDual expression vector Not applicable.

XL1-Blue E. coli Strain Not applicable.pDual expression vector Not applicable.

Response : pDual expression vector Not applicable. XL1-Blue E. coli Strain Not applicable.

Storage : pDual expression vector Not applicable.

XL1-Blue E. coli Strain Not applicable.

Plenesal : pDual expression vector Not applicable.

Disposal : pDual expression vector Not applicable. XL1-Blue E. coli Strain Not applicable.

Supplemental label

elements

Additional warning : pDual expression vector Not applicable. XL1-Blue E. coli Strain Not applicable.

Other hazards which do not : pDual expression vector None known. result in classification XL1-Blue E. coli Strain None known.

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Section 3. Composition and ingredient information

pDual expression vector Substance/mixture XL1-Blue E. coli Strain

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
XL1-Blue E. coli Strain Glycerol	≥10 - ≤30	56-81-5
Giycerol	210 - 230	30-61-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Deceription	of noocoon	first aid measures
Describtion	of necessary	r iirst aid measures

Eye contact : pDual expression vector 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.

Mixture

Mixture

XL1-Blue E. coli Strain 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 : pDual expression vector Remove victim to fresh air and keep at rest in a

position comfortable for breathing. Get medical

attention if symptoms occur.

XL1-Blue E. coli Strain Remove victim to fresh air and keep at rest in a

position comfortable for breathing. Get medical

attention if symptoms occur.

Skin contact : pDual expression vector Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get

medical attention if symptoms occur.

XL1-Blue E. coli Strain Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get

medical attention if symptoms occur.

Ingestion Wash out mouth with water. Remove victim to fresh : pDual expression vector

air and keep at rest in a position comfortable for breathing. 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.

XL1-Blue E. coli Strain Wash out mouth with water. Remove victim to fresh

air and keep at rest in a position comfortable for breathing. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

Skin contact

: pDual expression vector

XL1-Blue E. coli Strain

Inhalation : pDual expression vector

XL1-Blue E. coli Strain

: pDual expression vector

XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

No known significant effects or critical hazards. No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

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Section 4. First aid measures

Ingestion : pDual expression vector No known significant effects or critical hazards. XL1-Blue E. coli Strain No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : pDual expression vector No specific data. XL1-Blue E. coli Strain No specific data.

Inhalation : pDual expression vector No specific data. XL1-Blue E. coli Strain No specific data.

Ingestion : pDual expression vector No specific data. XL1-Blue E. coli Strain No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : pDual expression vector Treat symptomatically. Contact poison treatment

specialist immediately if large quantities have been

ingested or inhaled.

XL1-Blue E. coli Strain Treat symptomatically. Contact poison treatment

specialist immediately if large quantities have been

ingested or inhaled.

Specific treatments : pDual expression vector No specific treatment.

XL1-Blue E. coli Strain No specific treatment.

or without suitable training.

XL1-Blue E. coli Strain No action shall be taken involving any personal risk

or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

for fire-fighters

Suitable extinguishing : pDual expression vector Use an extinguishing agent suitable for the surrounding fire.

XL1-Blue E. coli Strain Use an extinguishing agent suitable for the

surrounding fire.

Unsuitable extinguishing : pDual expression vector None known. XL1-Blue E. coli Strain None known.

Specific hazards arising: pDual expression vector In a fire or if heated, a pressure increase will occur and the container may burst.

XL1-Blue E. coli Strain In a fire or if heated, a pressure increase will occur

and the container may burst.

Hazardous thermal: pDual expression vector No specific data.

decomposition products XL1-Blue E. coli Strain Decomposition products may include the following

materials:
carbon dioxide
carbon monoxide
halogenated compounds

metal oxide/oxides

Special protective actions: pDual expression vector 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.

XL1-Blue E. coli Strain 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.

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Section 5. Firefighting measures

Special protective equipment for fire-fighters

: pDual expression vector

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

XL1-Blue E. coli Strain

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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: pDual expression vector

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.

XL1-Blue E. coli Strain

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.

If specialised clothing is required to deal with the

For emergency responders: pDual expression vector

spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the

suitable and unsuitable materials. See also the information in "For non-emergency personnel". 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".

XL1-Blue E. coli Strain

Environmental precautions : pDual

: pDual expression vector

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).

XL1-Blue E. coli Strain

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).

Methods and material for containment and cleaning up

Methods for cleaning up : pDual expression vector

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.

XL1-Blue E. coli Strain

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.

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Section 7. Handling and storage

Precautions for safe handling

Protective measures

: pDual expression vector

Put on appropriate personal protective equipment (see Section 8).

XL1-Blue E. coli Strain

Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : pDual expression vector

XL1-Blue E. coli Strain

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.

Potentially biohazardous material. 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.

Conditions for safe storage, : pDual expression vector including any incompatibilities

XL1-Blue E. coli Strain

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. 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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
▼L1-Blue E. coli Strain Glycerol	Safe Work Australia (Australia, 12/2019). TWA: 10 mg/m³ 8 hours.

Appropriate engineering controls

Environmental exposure controls

- : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- : 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.

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Section 8. Exposure controls and personal protection

Individual protection measures

Hygiene measures

: Handle as biohazard material (Biosafety level 1). 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.

Section 9. Physical and chemical properties

Appearance

Physical state : pDual expression vector XL1-Blue E. coli Strain Liquid.

Colour : pDual expression vector Not available. Not available. Not available.

Odour : pDual expression vector Not available. XL1-Blue E. coli Strain Not available.

Odour threshold : pDual expression vector Not available. XL1-Blue E. coli Strain Not available.

pH : pDual expression vector 7.5 XL1-Blue E. coli Strain 7.5

Melting point : pDual expression vector 0°C (32°F) XL1-Blue E. coli Strain Not available.

Boiling point : pDual expression vector 100°C (212°F) XL1-Blue E. coli Strain Not available.

Flash point : pDual expression vector Not available.
XL1-Blue E. coli Strain Not available.

Flammability (solid, gas) : pDual expression vector XL1-Blue E. coli Strain Not applicable.

Lower and upper explosive
(flammable) limits: pDual expression vector
XL1-Blue E. coli StrainNot available.
Not available.Vapour pressure: pDual expression vector
XL1-Blue E. coli StrainNot available.
Not available.

Vapour density

XL1-Blue E. coli Strain

Not available.

Not available.

Not available.

Not available.

Not available.

Relative density : pDual expression vector Not available. XL1-Blue E. coli Strain Not available.

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Section 9. Physical and chemical properties

Solubility : pDual expression vector Easily soluble in the following materials: cold water

and hot water.

XL1-Blue E. coli Strain Soluble in the following materials: cold water and hot

water.

Not available.

Not available.

Not available.

Partition coefficient: n-

octanol/water

Viscosity

: pDual expression vector XL1-Blue E. coli Strain

Auto-ignition temperature

Not available. pDual expression vector XL1-Blue E. coli Strain Not available. : pDual expression vector Not available.

Decomposition temperature XL1-Blue E. coli Strain

pDual expression vector Not available. XL1-Blue E. coli Strain Not available.

Section 10. Stability and reactivity

Reactivity : pDual expression vector No specific test data related to reactivity available for

this product or its ingredients.

XL1-Blue E. coli Strain No specific test data related to reactivity available for

this product or its ingredients.

Chemical stability

: pDual expression vector

XL1-Blue E. coli Strain

The product is stable. The product is stable.

Possibility of hazardous

reactions

pDual expression vector

Under normal conditions of storage and use,

hazardous reactions will not occur.

XL1-Blue E. coli Strain

Under normal conditions of storage and use,

hazardous reactions will not occur.

Conditions to avoid

pDual expression vector XL1-Blue E. coli Strain

No specific data. No specific data.

Incompatible materials

: pDual expression vector

XL1-Blue E. coli Strain

May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.

Hazardous decomposition

products

: pDual expression vector

Under normal conditions of storage and use,

hazardous decomposition products should not be

produced.

XL1-Blue E. coli Strain

Under normal conditions of storage and use, hazardous decomposition products should not be

produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
XL1-Blue E. coli Strain				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
XL1-Blue E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitisation

Not available.

Mutagenicity

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Section 11. Toxicological information

: Not available.

Conclusion/Summary

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.

of exposure

pDual expression vector

Not available.

Information on likely routes

XL1-Blue E. coli Strain Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact pDual expression vector

XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

Inhalation

: pDual expression vector XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

Skin contact

: pDual expression vector XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

Ingestion pDual expression vector

XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : pDual expression vector No specific data.

XL1-Blue E. coli Strain No specific data. : pDual expression vector No specific data. XL1-Blue E. coli Strain No specific data.

Skin contact : pDual expression vector XL1-Blue E. coli Strain

No specific data. No specific data. No specific data.

pDual expression vector Ingestion XL1-Blue E. coli Strain

No specific data.

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

Short term exposure

Potential immediate

: Not available.

effects

Inhalation

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects Not available.

Potential chronic health effects

General : pDual expression vector No known significant effects or critical hazards.

XL1-Blue E. coli Strain No known significant effects or critical hazards.

: pDual expression vector No known significant effects or critical hazards. Carcinogenicity XL1-Blue E. coli Strain No known significant effects or critical hazards.

Mutagenicity pDual expression vector No known significant effects or critical hazards. XL1-Blue E. coli Strain No known significant effects or critical hazards.

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Section 11. Toxicological information

Reproductive toxicity

: pDual expression vector XL1-Blue E. coli Strain

No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	(3 /	(vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
▼L1-Blue E. coli Strain Glycerol	12600	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
XL1-Blue E. coli Strain			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
XL1-Blue E. coli Strain			
Glycerol	-1.76	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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.

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Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code.

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.

Transport in bulk according : Not available.

to IMO instruments

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

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

Australia : Not determined.

Canada : Not determined.

China : All components are listed or exempted.Europe : All components are listed or exempted.

Japan : Japan inventory (ENCS): All components are listed or exempted.

Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : Not determined.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : MI components are active or exempted.

Viet Nam : Not determined.

Section 16. Any other relevant information

History

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revision

Date of previous issue : 25/09/2018

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Section 16. Any other relevant information

Key to abbreviations

: ADG = Australian Dangerous Goods

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available

SUSMP = Standard Uniform Schedule of Medicine and Poisons

UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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