

SAFETY DATA SHEET



pSG5 Vector, Part Number 216201

Section 1. Identification

Product identifier : pSG5 Vector, Part Number 216201
Part No. (Chemical Kit) : 216201
Part No. : pSG5 Expression Vector 216201-51
 AG1 E. coli Strain 200274-81

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

Analytical reagent.

pSG5 Expression Vector 0.02 ml (20 µg 1 µg/µl)
 AG1 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 : pSG5 Expression Vector No signal word.
 AG1 E. coli Strain No signal word.

Hazard statements : pSG5 Expression Vector No known significant effects or critical hazards.
 AG1 E. coli Strain No known significant effects or critical hazards.

Precautionary statements

Prevention : pSG5 Expression Vector Not applicable.
 AG1 E. coli Strain Not applicable.

Response : pSG5 Expression Vector Not applicable.
 AG1 E. coli Strain Not applicable.

Storage : pSG5 Expression Vector Not applicable.
 AG1 E. coli Strain Not applicable.

Disposal : pSG5 Expression Vector Not applicable.
 AG1 E. coli Strain Not applicable.

Supplemental label elements : pSG5 Expression Vector Not applicable.
 AG1 E. coli Strain Not applicable.

Other hazards which do not result in classification : pSG5 Expression Vector None known.
 AG1 E. coli Strain None known.

Section 3. Composition and ingredient information

Substance/mixture : pSG5 Expression Vector Mixture
AG1 E. coli Strain Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
AG1 E. coli Strain		
Glycerol	≥10 - ≤30	56-81-5

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

Description of necessary first aid measures

Eye contact	: pSG5 Expression Vector AG1 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. 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	: pSG5 Expression Vector AG1 E. coli Strain	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: pSG5 Expression Vector AG1 E. coli Strain	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: pSG5 Expression Vector AG1 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. 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	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First aid measures

Skin contact	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. No specific data.
Inhalation	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. No specific data.
Skin contact	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. No specific data.
Ingestion	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. No specific data.

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

Notes to physician	: pSG5 Expression Vector AG1 E. coli Strain	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pSG5 Expression Vector AG1 E. coli Strain	No specific treatment. No specific treatment.
Protection of first-aiders	: pSG5 Expression Vector AG1 E. coli Strain	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: pSG5 Expression Vector AG1 E. coli Strain	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pSG5 Expression Vector AG1 E. coli Strain	None known. None known.
Specific hazards arising from the chemical	: pSG5 Expression Vector AG1 E. coli Strain	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

Section 5. Firefighting measures

Special protective actions for fire-fighters	: pSG5 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.
	AG1 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.
Special protective equipment for fire-fighters	: pSG5 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.
	AG1 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	: pSG5 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.
	AG1 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.
For emergency responders	: pSG5 Expression Vector	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".
	AG1 E. coli Strain	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".
Environmental precautions	: pSG5 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).
	AG1 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).
<u>Methods and material for containment and cleaning up</u>		
Methods for cleaning up	: pSG5 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.
	AG1 E. coli Strain	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble.

Section 6. Accidental release measures

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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: pSG5 Expression Vector AG1 E. coli Strain	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pSG5 Expression Vector AG1 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, including any incompatibilities	: pSG5 Expression Vector AG1 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. 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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
AG1 E. coli Strain Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

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

Section 8. Exposure controls and personal protection

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.

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	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Liquid. Liquid.
Colour	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Odour	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Odour threshold	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
pH	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	7.5 7.5
Melting point	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	0°C (32°F) Not available.
Boiling point	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	100°C (212°F) Not available.
Flash point	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Evaporation rate	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Flammability (solid, gas)	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: <input checked="" type="checkbox"/> pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.

Section 9. Physical and chemical properties

Vapour pressure	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Vapour density	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Relative density	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Solubility	: pSG5 Expression Vector AG1 E. coli Strain	Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Auto-ignition temperature	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Decomposition temperature	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.
Viscosity	: pSG5 Expression Vector AG1 E. coli Strain	Not available. Not available.

Section 10. Stability and reactivity

Reactivity	: pSG5 Expression Vector AG1 E. coli Strain	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: pSG5 Expression Vector AG1 E. coli Strain	The product is stable. The product is stable.
Possibility of hazardous reactions	: pSG5 Expression Vector AG1 E. coli Strain	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: pSG5 Expression Vector AG1 E. coli Strain	No specific data. No specific data.
Incompatible materials	: pSG5 Expression Vector AG1 E. coli Strain	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: pSG5 Expression Vector AG1 E. coli Strain	Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
AG1 E. coli Strain Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
AG1 E. coli Strain Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

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 : pSG5 Expression Vector
AG1 E. coli Strain Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : pSG5 Expression Vector
AG1 E. coli Strain No known significant effects or critical hazards.
No known significant effects or critical hazards.

Inhalation : pSG5 Expression Vector
AG1 E. coli Strain No known significant effects or critical hazards.
No known significant effects or critical hazards.

Skin contact : pSG5 Expression Vector
AG1 E. coli Strain No known significant effects or critical hazards.
No known significant effects or critical hazards.

Ingestion : pSG5 Expression Vector
AG1 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 : pSG5 Expression Vector
AG1 E. coli Strain No specific data.
No specific data.

Inhalation : pSG5 Expression Vector
AG1 E. coli Strain No specific data.
No specific data.

Skin contact : pSG5 Expression Vector
AG1 E. coli Strain No specific data.
No specific data.

Ingestion : pSG5 Expression Vector
AG1 E. coli Strain No specific data.
No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: pSG5 Expression Vector AG1 E. coli Strain	No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
AG1 E. coli Strain Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
AG1 E. coli Strain Glycerol	-1.76	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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.

Section 14. Transport information

Regulatory 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 to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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.

International lists

National inventory

Canada : All components are listed or exempted.
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.
Malaysia : Not determined.
New Zealand : All components are listed or exempted.

Section 15. Regulatory information

- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Turkey** : Not determined.
- United States** : All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 24/03/2017

Date of previous issue : 04/09/2015.

Version : 4

Key to abbreviations

- ADG = Australian Dangerous Goods
- 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)
- NOHSC = National Occupational Health and Safety Commission
- 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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