

SAFETY DATA SHEET

pFB Retroviral Vector, Part Number 217563

Section 1. Identification

Product identifier : pFB Retroviral Vector, Part Number 217563

Part no. (chemical kit) : 217563

Part no. : pFB Retroviral Vector 217563-51
pFB-Luciferase Expression Control Vector 217561-53

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

Material uses : Analytical reagent.

pFB Retroviral Vector 0.01 ml (10 µg 1 µg/µl)

pFB-Luciferase Expression Control Vector 0.01 ml (10 µg 1 µg/µl)

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 : pFB Retroviral Vector No signal word.
pFB-Luciferase Expression Control Vector No signal word.

Hazard statements : pFB Retroviral Vector No known significant effects or critical hazards.
pFB-Luciferase Expression Control Vector No known significant effects or critical hazards.

Precautionary statements

Prevention : pFB Retroviral Vector Not applicable.
pFB-Luciferase Expression Control Vector Not applicable.

Response : pFB Retroviral Vector Not applicable.
pFB-Luciferase Expression Control Vector Not applicable.

Storage : pFB Retroviral Vector Not applicable.
pFB-Luciferase Expression Control Vector Not applicable.

Disposal : pFB Retroviral Vector Not applicable.
pFB-Luciferase Expression Control Vector Not applicable.

Supplemental label elements

Additional warning phrases : pFB Retroviral Vector Not applicable.
pFB-Luciferase Expression Control Vector Not applicable.

Section 2. Hazard(s) identification

Other hazards which do not result in classification :

pFB Retroviral Vector	None known.
pFB-Luciferase Expression	None known.
Control Vector	

Section 3. Composition and ingredient information

Substance/mixture :

pFB Retroviral Vector	Mixture
pFB-Luciferase Expression	Mixture
Control Vector	

CAS number/other identifiers

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 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	:	pFB Retroviral 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.
		pFB-Luciferase Expression	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 Vector	
Inhalation	:	pFB Retroviral Vector	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		pFB-Luciferase Expression	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Control Vector	
Skin contact	:	pFB Retroviral Vector	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		pFB-Luciferase Expression	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Control Vector	
Ingestion	:	pFB Retroviral Vector	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.
		pFB-Luciferase Expression	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 Vector	

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	pFB Retroviral Vector	No known significant effects or critical hazards.
		pFB-Luciferase Expression	No known significant effects or critical hazards.
		Control Vector	
Inhalation	:	pFB Retroviral Vector	No known significant effects or critical hazards.
		pFB-Luciferase Expression	No known significant effects or critical hazards.
		Control Vector	
Skin contact	:	pFB Retroviral Vector	No known significant effects or critical hazards.
		pFB-Luciferase Expression	No known significant effects or critical hazards.
		Control Vector	

Section 4. First aid measures

Ingestion	: pFB Retroviral Vector	No known significant effects or critical hazards.
	pFB-Luciferase Expression	No known significant effects or critical hazards.
	Control Vector	

Over-exposure signs/symptoms

Eye contact	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Inhalation	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Skin contact	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Ingestion	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	

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

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

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: pFB Retroviral Vector	Use an extinguishing agent suitable for the surrounding fire.
	pFB-Luciferase Expression	Use an extinguishing agent suitable for the surrounding fire.
	Control Vector	
Unsuitable extinguishing media	: pFB Retroviral Vector	None known.
	pFB-Luciferase Expression	None known.
	Control Vector	
Specific hazards arising from the chemical	: pFB Retroviral Vector	In a fire or if heated, a pressure increase will occur and the container may burst.
	pFB-Luciferase Expression	In a fire or if heated, a pressure increase will occur and the container may burst.
	Control Vector	
Hazardous thermal decomposition products	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	

Section 5. Firefighting measures

Special protective actions for fire-fighters	: pFB Retroviral 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.
	pFB-Luciferase Expression Control 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.
Special protective equipment for fire-fighters	: pFB Retroviral Vector	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pFB-Luciferase Expression Control Vector	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	: pFB Retroviral 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.
	pFB-Luciferase Expression Control 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.
For emergency responders	: pFB Retroviral 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".
	pFB-Luciferase Expression Control 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".
Environmental precautions	: pFB Retroviral 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).
	pFB-Luciferase Expression Control 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).

Methods and material for containment and cleaning up

Methods for cleaning up	: pFB Retroviral 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.
	pFB-Luciferase Expression Control 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.

Section 6. Accidental release measures

disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: pFB Retroviral Vector	Put on appropriate personal protective equipment (see Section 8).
	pFB-Luciferase Expression Control Vector	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pFB Retroviral Vector	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.
	pFB-Luciferase Expression Control Vector	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	: pFB Retroviral Vector	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.
	pFB-Luciferase Expression Control Vector	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

None.

Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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 8. Exposure controls and personal protection

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.

Section 9. Physical and chemical properties

Appearance

Physical state	: pFB Retroviral Vector	Liquid.
	pFB-Luciferase Expression	Liquid.
	Control Vector	
Colour	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	
Odour	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	
Odour threshold	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	
pH	: pFB Retroviral Vector	7.5
	pFB-Luciferase Expression	7.5
	Control Vector	
Melting point	: pFB Retroviral Vector	0°C (32°F)
	pFB-Luciferase Expression	0°C (32°F)
	Control Vector	
Boiling point	: pFB Retroviral Vector	100°C (212°F)
	pFB-Luciferase Expression	100°C (212°F)
	Control Vector	
Flash point	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	
Evaporation rate	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	
Flammability (solid, gas)	: pFB Retroviral Vector	Not applicable.
	pFB-Luciferase Expression	Not applicable.
	Control Vector	

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Vapour pressure	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Vapour density	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Relative density	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Solubility	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not applicable. Not applicable.
Auto-ignition temperature	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Decomposition temperature	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.
Viscosity	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	Not available. Not available.

Section 10. Stability and reactivity

Reactivity	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	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	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	The product is stable. The product is stable.
Possibility of hazardous reactions	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	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	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	No specific data. No specific data.
Incompatible materials	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	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

Not available.

Irritation/Corrosion

Not available.

Sensitisation

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	: pFB Retroviral Vector	Not available.
	pFB-Luciferase Expression	Not available.
	Control Vector	

Potential acute health effects

Eye contact	: pFB Retroviral Vector	No known significant effects or critical hazards.
	pFB-Luciferase Expression	No known significant effects or critical hazards.
	Control Vector	
Inhalation	: pFB Retroviral Vector	No known significant effects or critical hazards.
	pFB-Luciferase Expression	No known significant effects or critical hazards.
	Control Vector	
Skin contact	: pFB Retroviral Vector	No known significant effects or critical hazards.
	pFB-Luciferase Expression	No known significant effects or critical hazards.
	Control Vector	
Ingestion	: pFB Retroviral Vector	No known significant effects or critical hazards.
	pFB-Luciferase Expression	No known significant effects or critical hazards.
	Control Vector	

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Inhalation	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Skin contact	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	
Ingestion	: pFB Retroviral Vector	No specific data.
	pFB-Luciferase Expression	No specific data.
	Control Vector	

Section 11. Toxicological information

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

Short 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

General	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: pFB Retroviral Vector pFB-Luciferase Expression Control Vector	No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

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

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 IMO instruments : Not available.

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	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.

Section 15. Regulatory information

United States :  All components are active or exempted.

Viet Nam :  All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 29/08/2021

Date of previous issue : 16/04/2019

Version : 6

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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