

# Material Safety Data Sheet



miRNA 1st-Strand cDNA Synthesis Kit, Part Number 600036

## 1. Identification of the material and supplier

### Names

**Product name** : miRNA 1st-Strand cDNA Synthesis Kit, Part Number 600036  
**Part No. (Chemical Kit)** : 600036  
**Part No.** : E. coli Poly A Polymerase (PAP) 600035-51  
 E. coli Poly A Polymerase Buffer 600035-52  
 Manganese chloride 600035-53  
 10 mM rATP 200340-81  
 Glycogen 252003-59  
 10X AffinityScript RT buffer 600100-52  
 RT Adaptor Primer 600035-54  
 100 mM dNTPs 200820-55  
 AffinityScript RT/RNase Block Enzyme Mixture 600559-52  
 Universal Reverse Primer 600035-55

**ADG** : Not regulated as Dangerous Goods according to the ADG Code

### Supplier

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number** : CHEMTREC®: +(61)-290372994

### Uses

**Area of application** : E. coli Poly A Polymerase (PAP) Industrial applications, Professional applications.  
 E. coli Poly A Polymerase Buffer Industrial applications, Professional applications.  
 Manganese chloride Industrial applications, Professional applications.  
 10 mM rATP Industrial applications, Professional applications.  
 Glycogen Industrial applications, Professional applications.  
 10X AffinityScript RT buffer Industrial applications, Professional applications.  
 RT Adaptor Primer Industrial applications, Professional applications.  
 100 mM dNTPs Industrial applications, Professional applications.  
 AffinityScript RT/RNase Block Enzyme Mixture Industrial applications, Professional applications.  
 Universal Reverse Primer Industrial applications, Professional applications.

### Material uses

: Analytical reagent.  
 E. coli Poly A Polymerase (PAP) 0.05 ml  
 E. coli Poly A Polymerase Buffer 0.2 ml  
 Manganese chloride 0.05 ml  
 RT Adaptor Primer 0.05 ml  
 Universal Reverse Primer 0.2 ml  
 rATP 0.25 ml  
 Glycogen 0.03 ml  
 10X AffinityScript RT buffer 0.1 ml  
 Deoxynucleotide mix 0.04 ml  
 AffinityScript RT/RNase Block Enzyme Mixture 0.05 ml

## 2 . Hazards identification

<b>Classification</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated. Not regulated.
<b>Risk phrases</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified.
<b>Safety phrases</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing. S36- Wear suitable protective clothing.
<b>Statement of hazardous/ dangerous nature</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride  10 mM rATP  Glycogen  10X AffinityScript RT buffer RT Adaptor Primer  100 mM dNTPs  AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

### 3 . Composition/information on ingredients

<b>Mixture</b>	:	E. coli Poly A	Yes.
		Polymerase (PAP)	
		E. coli Poly A	Yes.
		Polymerase Buffer	
		Manganese chloride	Yes.
		10 mM rATP	Yes.
		Glycogen	Yes.
		10X AffinityScript RT buffer	Yes.
		RT Adaptor Primer	Yes.
		100 mM dNTPs	Yes.
		AffinityScript RT/RNase	Yes.
		Block Enzyme Mixture	
		Universal Reverse Primer	Yes.

Ingredient name	CAS number	%
<b>E. coli Poly A Polymerase (PAP)</b> Glycerol	56-81-5	30 - 60
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	56-81-5	30 - 60

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

**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.**

### 4 . First-aid measures

<b>Inhalation</b>	:	E. coli Poly A Polymerase (PAP)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		E. coli Poly A Polymerase Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Manganese chloride	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		10 mM rATP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Glycogen	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		10X AffinityScript RT buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		RT Adaptor Primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		100 mM dNTPs	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		AffinityScript RT/RNase Block Enzyme Mixture	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if

## 4 . First-aid measures

### Ingestion

	Universal Reverse Primer	symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	E. coli Poly A Polymerase (PAP)	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.
	E. coli Poly A Polymerase Buffer	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.
	Manganese chloride	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.
	10 mM rATP	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.
	Glycogen	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.
	10X AffinityScript RT buffer	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.
	RT Adaptor Primer	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.
	100 mM dNTPs	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.
	AffinityScript RT/RNase Block Enzyme Mixture	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.
	Universal Reverse Primer	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.

## 4 . First-aid measures

<b>Skin contact</b>	:	E. coli Poly A Polymerase (PAP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		E. coli Poly A Polymerase Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Manganese chloride	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		10 mM rATP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Glycogen	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		10X AffinityScript RT buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		RT Adaptor Primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		100 mM dNTPs	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		AffinityScript RT/RNase Block Enzyme Mixture	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Universal Reverse Primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Eye contact</b>	:	E. coli Poly A Polymerase (PAP)	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.
		E. coli Poly A Polymerase Buffer	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.
		Manganese chloride	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.
		10 mM rATP	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.
		Glycogen	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.
		10X AffinityScript RT buffer	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.
		RT Adaptor Primer	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.
		100 mM dNTPs	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.
		AffinityScript RT/RNase Block Enzyme Mixture	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.

## 4 . First-aid measures

	Universal Reverse Primer	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.
<b>Protection of first-aiders</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride	No action shall be taken involving any personal risk or without suitable training.
	10 mM rATP	No action shall be taken involving any personal risk or without suitable training.
	Glycogen	No action shall be taken involving any personal risk or without suitable training.
	10X AffinityScript RT buffer	No action shall be taken involving any personal risk or without suitable training.
	RT Adaptor Primer	No action shall be taken involving any personal risk or without suitable training.
	100 mM dNTPs	No action shall be taken involving any personal risk or without suitable training.
	AffinityScript RT/RNase Block Enzyme Mixture	No action shall be taken involving any personal risk or without suitable training.
	Universal Reverse Primer	No action shall be taken involving any personal risk or without suitable training.
<b>Advice to doctor</b>	: E. coli Poly A Polymerase (PAP)	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	E. coli Poly A Polymerase Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Manganese chloride	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10 mM rATP	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Glycogen	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10X AffinityScript RT buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	RT Adaptor Primer	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	100 mM dNTPs	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	AffinityScript RT/RNase Block Enzyme Mixture	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Universal Reverse Primer	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.



## 5 . Fire-fighting measures

### Extinguishing media

<b>Suitable</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride  10 mM rATP  Glycogen  10X AffinityScript RT buffer RT Adaptor Primer  100 mM dNTPs  AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	: E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.
<b>Special exposure hazards</b>	: E. coli Poly A Polymerase (PAP)  E. coli Poly A Polymerase Buffer  Manganese chloride  10 mM rATP  Glycogen  10X AffinityScript RT buffer  RT Adaptor Primer  100 mM dNTPs	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. 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. 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. 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. 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. 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. 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. 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. 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. 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.

## 5 . Fire-fighting measures

	the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
AffinityScript RT/RNase Block Enzyme Mixture	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.
Universal Reverse Primer	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.
E. coli Poly A Polymerase (PAP)	In a fire or if heated, a pressure increase will occur and the container may burst.
E. coli Poly A Polymerase Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Manganese chloride	In a fire or if heated, a pressure increase will occur and the container may burst.
10 mM rATP	In a fire or if heated, a pressure increase will occur and the container may burst.
Glycogen	In a fire or if heated, a pressure increase will occur and the container may burst.
10X AffinityScript RT buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
RT Adaptor Primer	In a fire or if heated, a pressure increase will occur and the container may burst.
100 mM dNTPs	In a fire or if heated, a pressure increase will occur and the container may burst.
AffinityScript RT/RNase Block Enzyme Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Universal Reverse Primer	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b> : E. coli Poly A Polymerase (PAP)	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
E. coli Poly A Polymerase Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Manganese chloride	No specific data.
10 mM rATP	No specific data.
Glycogen	Decomposition products may include the following materials: carbon dioxide carbon monoxide
10X AffinityScript RT buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
RT Adaptor Primer	No specific data.
100 mM dNTPs	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
AffinityScript RT/RNase	Decomposition products may include the following



## 5 . Fire-fighting measures

Block Enzyme Mixture materials:  
carbon dioxide  
carbon monoxide

Universal Reverse Primer No specific data.

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

## 6 . Accidental release measures

<b>Personal precautions</b>	:	E. coli Poly A Polymerase (PAP)	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 (see Section 8).
		E. coli Poly A Polymerase Buffer	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 (see Section 8).
		Manganese chloride	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 (see Section 8).
		10 mM rATP	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 (see Section 8).
		Glycogen	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 (see Section 8).
		10X AffinityScript RT buffer	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 (see Section 8).
		RT Adaptor Primer	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 (see Section 8).
		100 mM dNTPs	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 (see Section 8).
		AffinityScript RT/RNase Block Enzyme Mixture	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 (see Section 8).
		Universal Reverse Primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas.

## 6 . Accidental release measures

		Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see Section 8).
<b>Environmental precautions</b>	<ul style="list-style-type: none"> <li>: E. coli Poly A Polymerase (PAP)</li> <li>E. coli Poly A Polymerase Buffer</li> <li>Manganese chloride</li> <li>10 mM rATP</li> <li>Glycogen</li> <li>10X AffinityScript RT buffer</li> <li>RT Adaptor Primer</li> <li>100 mM dNTPs</li> <li>AffinityScript RT/RNase Block Enzyme Mixture</li> <li>Universal Reverse Primer</li> </ul>	<p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p>
<b>Methods for cleaning up</b>	<ul style="list-style-type: none"> <li>: E. coli Poly A Polymerase (PAP)</li> <li>E. coli Poly A Polymerase Buffer</li> <li>Manganese chloride</li> <li>10 mM rATP</li> </ul>	<p>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.</p> <p>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.</p> <p>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.</p> <p>Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble.</p>

## 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.
Glycogen	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.
10X AffinityScript RT buffer	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.
RT Adaptor Primer	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.
100 mM dNTPs	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.
AffinityScript RT/RNase Block Enzyme Mixture	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.
Universal Reverse Primer	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.

## 7 . Handling and storage

<b>Handling</b>	: E. coli Poly A Polymerase (PAP)	Put on appropriate personal protective equipment (see Section 8). 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.
	E. coli Poly A Polymerase Buffer	Put on appropriate personal protective equipment (see Section 8). 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.
	Manganese chloride	Put on appropriate personal protective equipment (see Section 8). 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.
	10 mM rATP	Put on appropriate personal protective equipment (see

## 7 . Handling and storage

	Section 8). 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.
Glycogen	Put on appropriate personal protective equipment (see Section 8). 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.
10X AffinityScript RT buffer	Put on appropriate personal protective equipment (see Section 8). 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.
RT Adaptor Primer	Put on appropriate personal protective equipment (see Section 8). 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.
100 mM dNTPs	Put on appropriate personal protective equipment (see Section 8). 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.
AffinityScript RT/RNase Block Enzyme Mixture	Put on appropriate personal protective equipment (see Section 8). 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.
Universal Reverse Primer	Put on appropriate personal protective equipment (see Section 8). 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.

### Storage

: E. coli Poly A Polymerase (PAP)	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.
E. coli Poly A Polymerase Buffer	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

## 7 . Handling and storage

Manganese chloride	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
10 mM rATP	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
Glycogen	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
10X AffinityScript RT buffer	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
RT Adaptor Primer	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
100 mM dNTPs	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
AffinityScript RT/RNase Block Enzyme Mixture	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
Universal Reverse Primer	containment to avoid environmental contamination. Store in accordance with local regulations. Store in



## 7 . Handling and storage

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.

## 8 . Exposure controls/personal protection

### Occupational exposure limits

Ingredient name	Exposure limits
<b>E. coli Poly A Polymerase (PAP)</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.

No additional exposure standard allocated for other ingredients/components covered by the MSDS other than those listed in the table above.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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.

### Exposure controls

- Engineering measures** :  Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.
- Eyes** : 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 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.
- Hands** : 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.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : 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.
- 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.



## 9 . Physical and chemical properties

<b>Physical state</b>	:	E. coli Poly A	Liquid.
		Polymerase (PAP)	
		E. coli Poly A	Liquid.
		Polymerase Buffer	
		Manganese chloride	Liquid.
		10 mM rATP	Liquid.
		Glycogen	Liquid.
		10X AffinityScript RT buffer	Liquid.
		RT Adaptor Primer	Liquid.
		100 mM dNTPs	Liquid.
		AffinityScript RT/RNase	Liquid.
		Block Enzyme Mixture	
		Universal Reverse Primer	Liquid.
	<b>Colour</b>	:	E. coli Poly A
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>Odour</b>		:	E. coli Poly A
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
	<b>Odour threshold</b>	:	E. coli Poly A
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>Boiling point</b>		:	E. coli Poly A
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	100°C (212°F)
		10 mM rATP	100°C (212°F)
	Glycogen	100°C (212°F)	

## 9 . Physical and chemical properties

	10X AffinityScript RT buffer	Not available.
	RT Adaptor Primer	100°C (212°F)
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	100°C (212°F)
<b>Melting point</b>	: E. coli Poly A Polymerase (PAP)	Not available.
	E. coli Poly A Polymerase Buffer	Not available.
	Manganese chloride	0°C (32°F)
	10 mM rATP	0°C (32°F)
	Glycogen	0°C (32°F)
	10X AffinityScript RT buffer	Not available.
	RT Adaptor Primer	0°C (32°F)
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	0°C (32°F)
<b>Vapour pressure</b>	: E. coli Poly A Polymerase (PAP)	Not available.
	E. coli Poly A Polymerase Buffer	Not available.
	Manganese chloride	Not available.
	10 mM rATP	Not available.
	Glycogen	Not available.
	10X AffinityScript RT buffer	Not available.
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.
<b>Relative density</b>	: E. coli Poly A Polymerase (PAP)	Not available.
	E. coli Poly A Polymerase Buffer	Not available.
	Manganese chloride	Not available.
	10 mM rATP	Not available.
	Glycogen	Not available.
	10X AffinityScript RT buffer	Not available.
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.
<b>Flash point</b>	: E. coli Poly A Polymerase (PAP)	Not available.
	E. coli Poly A Polymerase Buffer	Not available.
	Manganese chloride	Not available.
	10 mM rATP	Not available.
	Glycogen	Not available.
	10X AffinityScript RT buffer	Not available.
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.

## 9 . Physical and chemical properties

<b>Flammable limits</b>	:	E. coli Poly A	Not available.
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>Vapour density</b>	:	E. coli Poly A	Not available.
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>pH</b>	:	E. coli Poly A	8
		Polymerase (PAP)	
		E. coli Poly A	8
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	7
		Glycogen	Not available.
		10X AffinityScript RT buffer	8.3
		RT Adaptor Primer	7.5
		100 mM dNTPs	7.5
		AffinityScript RT/RNase	8
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>Viscosity</b>	:	E. coli Poly A	Not available.
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
		10X AffinityScript RT buffer	Not available.
		RT Adaptor Primer	Not available.
		100 mM dNTPs	Not available.
		AffinityScript RT/RNase	Not available.
		Block Enzyme Mixture	
		Universal Reverse Primer	Not available.
<b>Auto-ignition temperature</b>	:	E. coli Poly A	Not available.
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
	Glycogen	Not available.	
	10X AffinityScript RT	Not available.	

## 9 . Physical and chemical properties

	buffer	
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.
<b>Evaporation rate</b>	: E. coli Poly A	Not available.
	Polymerase (PAP)	
	E. coli Poly A	Not available.
	Polymerase Buffer	
	Manganese chloride	Not available.
	10 mM rATP	Not available.
	Glycogen	Not available.
	10X AffinityScript RT	Not available.
	buffer	
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.
<b>Solubility</b>	: E. coli Poly A	Soluble in the following materials: cold water and hot water.
	Polymerase (PAP)	
	E. coli Poly A	Easily soluble in the following materials: cold water and hot water.
	Polymerase Buffer	
	Manganese chloride	Easily soluble in the following materials: cold water and hot water.
	10 mM rATP	Easily soluble in the following materials: cold water and hot water.
	Glycogen	Easily soluble in the following materials: cold water and hot water.
	10X AffinityScript RT	
	buffer	Easily soluble in the following materials: cold water and hot water.
	RT Adaptor Primer	Easily soluble in the following materials: cold water and hot water.
	100 mM dNTPs	Easily soluble in the following materials: cold water and hot water.
	AffinityScript RT/RNase	
	Block Enzyme Mixture	Soluble in the following materials: cold water and hot water.
	Universal Reverse Primer	Easily soluble in the following materials: cold water and hot water.

## 10 . Stability and reactivity

<b>Chemical stability</b>	: E. coli Poly A	The product is stable.
	Polymerase (PAP)	
	E. coli Poly A	The product is stable.
	Polymerase Buffer	
	Manganese chloride	The product is stable.
	10 mM rATP	The product is stable.
	Glycogen	The product is stable.
	10X AffinityScript RT	The product is stable.
	buffer	
	RT Adaptor Primer	The product is stable.
	100 mM dNTPs	The product is stable.
	AffinityScript RT/RNase	The product is stable.
	Block Enzyme Mixture	
	Universal Reverse Primer	The product is stable.
<b>Possibility of hazardous reactions</b>	: E. coli Poly A	Under normal conditions of storage and use, hazardous reactions will not occur.
	Polymerase (PAP)	
	E. coli Poly A	Under normal conditions of storage and use, hazardous reactions will not occur.
	Polymerase Buffer	
	Manganese chloride	Under normal conditions of storage and use, hazardous reactions will not occur.
	10 mM rATP	Under normal conditions of storage and use, hazardous reactions will not occur.

## 10 . Stability and reactivity

	Glycogen	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X AffinityScript RT buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	RT Adaptor Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
	100 mM dNTPs	Under normal conditions of storage and use, hazardous reactions will not occur.
	AffinityScript RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
	Universal Reverse Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: E. coli Poly A Polymerase (PAP)	No specific data.
	E. coli Poly A Polymerase Buffer	No specific data.
	Manganese chloride	No specific data.
	10 mM rATP	No specific data.
	Glycogen	No specific data.
	10X AffinityScript RT buffer	No specific data.
	RT Adaptor Primer	No specific data.
	100 mM dNTPs	No specific data.
	AffinityScript RT/RNase Block Enzyme Mixture	No specific data.
	Universal Reverse Primer	No specific data.
<b>Materials to avoid</b>	: E. coli Poly A Polymerase (PAP)	No specific data.
	E. coli Poly A Polymerase Buffer	No specific data.
	Manganese chloride	No specific data.
	10 mM rATP	No specific data.
	Glycogen	No specific data.
	10X AffinityScript RT buffer	No specific data.
	RT Adaptor Primer	No specific data.
	100 mM dNTPs	No specific data.
	AffinityScript RT/RNase Block Enzyme Mixture	No specific data.
	Universal Reverse Primer	No specific data.
<b>Hazardous decomposition products</b>	: E. coli Poly A Polymerase (PAP)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	E. coli Poly A Polymerase Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Manganese chloride	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10 mM rATP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Glycogen	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X AffinityScript RT buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	RT Adaptor Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM dNTPs	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AffinityScript RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Universal Reverse Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 . Toxicological information

### Potential acute health effects

<b>Inhalation</b>	:	E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer	No known significant effects or critical hazards.  Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		RT Adaptor Primer 100 mM dNTPs	No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	:	AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	No known significant effects or critical hazards.
	:	E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	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. No known significant effects or critical hazards.
		RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	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.
<b>Skin contact</b>	:	E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	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. No known significant effects or critical hazards.
		RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	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.
		E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	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.
<b>Eye contact</b>	:	E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	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. No known significant effects or critical hazards.
		RT Adaptor Primer 100 mM dNTPs AffinityScript RT/RNase Block Enzyme Mixture Universal Reverse Primer	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.
		E. coli Poly A Polymerase (PAP) E. coli Poly A Polymerase Buffer Manganese chloride 10 mM rATP Glycogen 10X AffinityScript RT buffer	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.

### Acute toxicity



## 11 . Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>E. coli Poly A Polymerase (PAP)</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

**Conclusion/Summary** : Not available.

### Potential chronic health effects

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>E. coli Poly A Polymerase (PAP)</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

**Conclusion/Summary** : Not available.

#### Sensitiser

**Conclusion/Summary** : Not available.

### Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

<b>Chronic effects</b>	: E. coli Poly A Polymerase (PAP)	No known significant effects or critical hazards.
	E. coli Poly A Polymerase Buffer	No known significant effects or critical hazards.
	Manganese chloride	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	Glycogen	No known significant effects or critical hazards.
	10X AffinityScript RT buffer	No known significant effects or critical hazards.
	RT Adaptor Primer	No known significant effects or critical hazards.
	100 mM dNTPs	No known significant effects or critical hazards.
	AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
	Universal Reverse Primer	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: E. coli Poly A Polymerase (PAP)	No known significant effects or critical hazards.
	E. coli Poly A Polymerase Buffer	No known significant effects or critical hazards.
	Manganese chloride	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	Glycogen	No known significant effects or critical hazards.
	10X AffinityScript RT buffer	No known significant effects or critical hazards.
	RT Adaptor Primer	No known significant effects or critical hazards.
	100 mM dNTPs	No known significant effects or critical hazards.
	AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
	Universal Reverse Primer	No known significant effects or critical hazards.

## 11 . Toxicological information

<b>Mutagenicity</b>	:	E. coli Poly A	No known significant effects or critical hazards.
		Polymerase (PAP)	
		E. coli Poly A	No known significant effects or critical hazards.
		Polymerase Buffer	
		Manganese chloride	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		Glycogen	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RT Adaptor Primer	No known significant effects or critical hazards.
		100 mM dNTPs	No known significant effects or critical hazards.
<b>Teratogenicity</b>	:	E. coli Poly A	No known significant effects or critical hazards.
		Polymerase (PAP)	
		E. coli Poly A	No known significant effects or critical hazards.
		Polymerase Buffer	
		Manganese chloride	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		Glycogen	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RT Adaptor Primer	No known significant effects or critical hazards.
		100 mM dNTPs	No known significant effects or critical hazards.
<b>Developmental effects</b>	:	E. coli Poly A	No known significant effects or critical hazards.
		Polymerase (PAP)	
		E. coli Poly A	No known significant effects or critical hazards.
		Polymerase Buffer	
		Manganese chloride	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		Glycogen	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RT Adaptor Primer	No known significant effects or critical hazards.
		100 mM dNTPs	No known significant effects or critical hazards.
<b>Fertility effects</b>	:	E. coli Poly A	No known significant effects or critical hazards.
		Polymerase (PAP)	
		E. coli Poly A	No known significant effects or critical hazards.
		Polymerase Buffer	
		Manganese chloride	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		Glycogen	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RT Adaptor Primer	No known significant effects or critical hazards.
		100 mM dNTPs	No known significant effects or critical hazards.
	AffinityScript RT/RNase	No known significant effects or critical hazards.	
	Block Enzyme Mixture		
	Universal Reverse Primer	No known significant effects or critical hazards.	

### Over-exposure signs/symptoms

## 11 . Toxicological information

<b>Inhalation</b>	:	E. coli Poly A	No specific data.
		Polymerase (PAP)	
		E. coli Poly A	No specific data.
		Polymerase Buffer	
		Manganese chloride	No specific data.
		10 mM rATP	No specific data.
		Glycogen	No specific data.
		10X AffinityScript RT buffer	No specific data.
		RT Adaptor Primer	No specific data.
		100 mM dNTPs	No specific data.
		AffinityScript RT/RNase	No specific data.
		Block Enzyme Mixture	
		Universal Reverse Primer	No specific data.
<b>Ingestion</b>	:	E. coli Poly A	No specific data.
		Polymerase (PAP)	
		E. coli Poly A	No specific data.
		Polymerase Buffer	
		Manganese chloride	No specific data.
		10 mM rATP	No specific data.
		Glycogen	No specific data.
		10X AffinityScript RT buffer	No specific data.
		RT Adaptor Primer	No specific data.
		100 mM dNTPs	No specific data.
		AffinityScript RT/RNase	No specific data.
		Block Enzyme Mixture	
		Universal Reverse Primer	No specific data.
<b>Skin</b>	:	E. coli Poly A	No specific data.
		Polymerase (PAP)	
		E. coli Poly A	No specific data.
		Polymerase Buffer	
		Manganese chloride	No specific data.
		10 mM rATP	No specific data.
		Glycogen	No specific data.
		10X AffinityScript RT buffer	No specific data.
		RT Adaptor Primer	No specific data.
		100 mM dNTPs	No specific data.
		AffinityScript RT/RNase	No specific data.
		Block Enzyme Mixture	
		Universal Reverse Primer	No specific data.
<b>Eyes</b>	:	E. coli Poly A	No specific data.
		Polymerase (PAP)	
		E. coli Poly A	No specific data.
		Polymerase Buffer	
		Manganese chloride	No specific data.
		10 mM rATP	No specific data.
		Glycogen	No specific data.
		10X AffinityScript RT buffer	No specific data.
		RT Adaptor Primer	No specific data.
		100 mM dNTPs	No specific data.
		AffinityScript RT/RNase	No specific data.
		Block Enzyme Mixture	
		Universal Reverse Primer	No specific data.
<b>Other adverse symptoms</b>	:	E. coli Poly A	Not available.
		Polymerase (PAP)	
		E. coli Poly A	Not available.
		Polymerase Buffer	
		Manganese chloride	Not available.
		10 mM rATP	Not available.
		Glycogen	Not available.
	10X AffinityScript RT	Not available.	

## 11 . Toxicological information

	buffer	
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Not available.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.
<b>Target organs</b>	: <b>E. coli Poly A Polymerase (PAP)</b>	Contains material which may cause damage to the following organs: kidneys, upper respiratory tract, skin, eyes, stomach.
	E. coli Poly A Polymerase Buffer	Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes, stomach.
	Manganese chloride	Not available.
	10 mM rATP	Not available.
	Glycogen	Not available.
	10X AffinityScript RT buffer	Contains material which may cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, eyes.
	RT Adaptor Primer	Not available.
	100 mM dNTPs	Not available.
	AffinityScript RT/RNase	Contains material which may cause damage to the following organs: kidneys, upper respiratory tract, skin, eyes.
	Block Enzyme Mixture	
	Universal Reverse Primer	Not available.

## 12 . Ecological information

**Ecotoxicity** : May cause long-term adverse effects in the aquatic environment.

### Other ecological information

#### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>E. coli Poly A Polymerase (PAP)</b> Glycerol	-1.76	-	low
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	-1.76	-	low

**Other adverse effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

**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. 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.

## 14 . Transport information

### Regulatory information

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

## 15 . Regulatory information

### [Standard Uniform Schedule of Medicine and Poisons](#)

Not regulated.

### [Control of Scheduled Carcinogenic Substances](#)

<a href="#">Ingredient name</a>	<a href="#">Schedule</a>
No listed substance	

[Australia inventory \(AICS\)](#) :  Not determined.

## 16 . Other information

[Date of issue](#) : 20/04/2015

[Date of previous issue](#) : 13/12/2012.

Indicates information that has changed from previously issued version.

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