

# SAFETY DATA SHEET

## Seahorse XF Hu T Cell Activation Assay Kit

### Section 1. Identification

**Product identifier** : Seahorse XF Hu T Cell Activation Assay Kit  
**Part no. (chemical kit)** : 103759-100, 103766-100  
**Part no.** : -deoxyglucose (2-DG) 103761-000  
 ImmunoCult™ Human CD3/CD28 T Cell 103760-000  
 Activator

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

**Identified uses** : For research use only.  
-deoxyglucose (2-DG) 2 x 246.24 mg  
 ImmunoCult™ Human CD3/CD28 T Cell 1 x 2 ml  
 Activator

**Uses advised against** : Not for use in diagnostic procedures (RUO).

**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.

ImmunoCult™ Human CD3/CD28 T Cell Activator Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2%

#### GHS label elements

**Signal word** : -deoxyglucose (2-DG) No signal word.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator No signal word.

**Hazard statements** : -deoxyglucose (2-DG) No known significant effects or critical hazards.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : -deoxyglucose (2-DG) Not applicable.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator Not applicable.

**Response** : -deoxyglucose (2-DG) Not applicable.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator Not applicable.

**Storage** : -deoxyglucose (2-DG) Not applicable.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator Not applicable.

**Disposal** : -deoxyglucose (2-DG) Not applicable.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator Not applicable.

#### Supplemental label elements

## Section 2. Hazard(s) identification

**Additional warning phrases** : 2-Deoxyglucose (2-DG) Not applicable.  
ImmunoCult™ Human Not applicable.  
CD3/CD28 T Cell Activator

**Other hazards which do not result in classification** : 2-Deoxyglucose (2-DG) None known.  
ImmunoCult™ Human None known.  
CD3/CD28 T Cell Activator

## Section 3. Composition and ingredient information

**Substance/mixture** : 2-Deoxyglucose (2-DG) Substance  
ImmunoCult™ Human Mixture  
CD3/CD28 T Cell Activator

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
2-deoxyglucose (2-DG)		
2-deoxy-D-glucose	100	154-17-6

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

## Section 4. First aid measures

### Description of necessary first aid measures

**Eye contact** : 2-Deoxyglucose (2-DG) 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.  
ImmunoCult™ Human 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.  
CD3/CD28 T Cell Activator

**Inhalation** : 2-Deoxyglucose (2-DG) Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.  
ImmunoCult™ Human 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.  
CD3/CD28 T Cell Activator

**Skin contact** : 2-Deoxyglucose (2-DG) Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  
ImmunoCult™ Human Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  
CD3/CD28 T Cell Activator

**Ingestion** : 2-Deoxyglucose (2-DG) 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.  
ImmunoCult™ Human 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.  
CD3/CD28 T Cell Activator

## Section 4. First aid measures

vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific data. No specific data.
<b>Inhalation</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific data. No specific data.
<b>Skin contact</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific data. No specific data.
<b>Ingestion</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific data. No specific data.

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

<b>Notes to physician</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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.
<b>Specific treatments</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
-------------------------------------	---	--

## Section 5. Firefighting measures


<b>Unsuitable extinguishing media</b>	: 2-Deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	None known. None known.
<b>Specific hazards arising from the chemical</b>	: 2-Deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: 2-Deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
<b>Special protective actions for fire-fighters</b>	: 2-Deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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.
<b>Special protective equipment for fire-fighters</b>	: 2-Deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. 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

<b>For non-emergency personnel</b>	: 2-Deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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. 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.
<b>For emergency responders</b>	: 2-Deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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". 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".

## Section 6. Accidental release measures



<b>Environmental precautions</b>	:  -deoxyglucose (2-DG)	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).
	ImmunoCult™ Human CD3/CD28 T Cell Activator	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


<b>Methods for cleaning up</b>	:  -deoxyglucose (2-DG)	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	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.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	:  -deoxyglucose (2-DG)	Put on appropriate personal protective equipment (see Section 8).
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	:  -deoxyglucose (2-DG)	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.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	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

:  -deoxyglucose (2-DG)	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.
ImmunoCult™ Human CD3/CD28 T Cell Activator	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

## Section 7. Handling and storage

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.

#### Biological exposure indices

No exposure indices known.

- 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.

### 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 and safety characteristics

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

### Appearance

- Physical state** :  -deoxyglucose (2-DG) Solid.  
ImmunoCult™ Human Liquid. [Clear.]  
CD3/CD28 T Cell Activator



## Section 9. Physical and chemical properties and safety characteristics

<b>Decomposition temperature</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available. Not available.
<b>Viscosity</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	Not applicable. Not available.
<b>Particle characteristics</b>		
<b>Median particle size</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available. Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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.
<b>Chemical stability</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No specific data. No specific data.
<b>Incompatible materials</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>Hazardous decomposition products</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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.



## Section 11. Toxicological information

### 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** : 2-deoxyglucose (2-DG) Not available.  
ImmunoCult™ Human Not available.  
CD3/CD28 T Cell Activator

### Potential acute health effects

**Eye contact** : 2-deoxyglucose (2-DG) No known significant effects or critical hazards.  
ImmunoCult™ Human No known significant effects or critical hazards.  
CD3/CD28 T Cell Activator

**Inhalation** : 2-deoxyglucose (2-DG) No known significant effects or critical hazards.  
ImmunoCult™ Human No known significant effects or critical hazards.  
CD3/CD28 T Cell Activator

**Skin contact** : 2-deoxyglucose (2-DG) No known significant effects or critical hazards.  
ImmunoCult™ Human No known significant effects or critical hazards.  
CD3/CD28 T Cell Activator

**Ingestion** : 2-deoxyglucose (2-DG) No known significant effects or critical hazards.  
ImmunoCult™ Human No known significant effects or critical hazards.  
CD3/CD28 T Cell Activator

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : 2-deoxyglucose (2-DG) No specific data.  
ImmunoCult™ Human No specific data.  
CD3/CD28 T Cell Activator

**Inhalation** : 2-deoxyglucose (2-DG) No specific data.  
ImmunoCult™ Human No specific data.  
CD3/CD28 T Cell Activator

**Skin contact** : 2-deoxyglucose (2-DG) No specific data.  
ImmunoCult™ Human No specific data.  
CD3/CD28 T Cell Activator

**Ingestion** : 2-deoxyglucose (2-DG) No specific data.  
ImmunoCult™ Human No specific data.  
CD3/CD28 T Cell Activator

### 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

## Section 11. Toxicological information

<b>General</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	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** : Not determined.

**New Zealand** : Not determined.

**United States** : Not determined.

## Section 16. Any other relevant information

### History

**Date of issue/Date of revision** : 29/04/2024

**Date of previous issue** : 27/10/2023

**Version** : 3.1

**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

## Section 16. Any other relevant information

### [Procedure used to derive the classification](#)

#### Classification

Not classified.

✔ Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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