

# SAFETY DATA SHEET



Seahorse XF Hu T Cell Activation Assay Kit

## Section 1. Identification

### 1.1 Product identifier

**Product name** : 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 Activator 103760-000  
**Validation date** : 4/29/2024

### 1.2 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 Activator 1 x 2 ml  
**Uses advised against** : Not for use in diagnostic procedures (RUO).

### 1.3 Details of the supplier of the safety data sheet

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
 5301 Stevens Creek Blvd  
 Santa Clara, CA 95051, USA  
 800-227-9770

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** : -deoxyglucose (2-DG) While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.  
 ImmunoCult™ Human CD3/CD28 T Cell Activator While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### 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%

### 2.2 GHS label elements

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

## Section 2. Hazards identification

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

### Precautionary statements

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

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

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

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

**Supplemental label elements** : 2-deoxyglucose (2-DG) None known.  
ImmunoCult™ Human CD3/CD28 None known.  
T Cell Activator

### 2.3 Other hazards

**Hazards not otherwise classified** : 2-deoxyglucose (2-DG) None known.  
ImmunoCult™ Human CD3/CD28 None known.  
T Cell Activator

## Section 3. Composition/information on ingredients

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

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

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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.**

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

## Section 4. First aid measures

### 4.1 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 CD3/CD28 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.  
T Cell Activator

## Section 4. First aid measures

<b>Inhalation</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.  Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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>Skin contact</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 2-deoxyglucose (2-DG)  ImmunoCult™ Human CD3/CD28 T Cell Activator	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.  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.

### 4.2 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.

## Section 4. First aid measures

### 4.3 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. Fire-fighting measures

### 5.1 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.
<b>Unsuitable extinguishing media</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	None known. None known.

### 5.2 Special hazards arising from the substance or mixture

<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

### 5.3 Advice for firefighters

<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.
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## Section 5. Fire-fighting measures

<b>Special protective equipment for fire-fighters</b>	: 2-deoxyglucose (2-DG)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 2-deoxyglucose (2-DG)	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 spilled material. Put on appropriate personal protective equipment.
	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 spilled material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: 2-deoxyglucose (2-DG)	If specialized 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".
	ImmunoCult™ Human CD3/CD28 T Cell Activator	If specialized 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".

### 6.2 Environmental precautions

: 2-deoxyglucose (2-DG)	Avoid dispersal of spilled 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 spilled 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).

### 6.3 Methods and materials for containment and cleaning up

<b>Methods for cleaning up</b>	: 2-deoxyglucose (2-DG)	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled 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

### 7.1 Precautions for safe handling

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

### 7.2 Conditions for safe storage, including any incompatibilities

: 2-deoxyglucose (2-DG)  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 must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
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### 7.3 Specific end use(s)

<b>Recommendations</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: 2-deoxyglucose (2-DG) ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available. Not available.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
2-deoxyglucose (2-DG) 2-deoxy-D-glucose	None.

#### Biological exposure indices

No exposure indices known.

### 8.2 Exposure controls

- 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** : 2-deoxyglucose (2-DG) Solid.  
ImmunoCult™ Human CD3/CD28 T Cell Activator Liquid. [Clear.]
- Color** : 2-deoxyglucose (2-DG) Not available.  
ImmunoCult™ Human CD3/CD28 T Cell Activator White.

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

<b>Odor</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Odor threshold</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>pH</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Melting point/freezing point</b>	: 2-deoxyglucose (2-DG)	146 to 147°C (294.8 to 296.6°F)
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Flash point</b>	: 2-deoxyglucose (2-DG)	Not applicable.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Evaporation rate</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Flammability</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not applicable.
<b>Lower and upper explosion limit/flammability limit</b>	: 2-deoxyglucose (2-DG)	Not applicable.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.

<b>Vapor pressure</b>	:	Vapor Pressure at 20°C			Vapor pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	<b>Ingredient name</b>						
	ImmunoCult™ Human CD3/CD28 T Cell Activator						
	water	17.5	2.3	-	92.258	12.3	-

<b>Relative vapor density</b>	: 2-deoxyglucose (2-DG)	Not applicable.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.
<b>Relative density</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.

<b>Solubility(ies)</b>	:	<b>Media</b>	<b>Result</b>
		2-deoxyglucose (2-DG)	
		water	Soluble
		ImmunoCult™ Human CD3/CD28 T Cell Activator	
		water	Soluble

<b>Partition coefficient: n-octanol/water</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not applicable.
<b>Auto-ignition temperature</b>	: 2-deoxyglucose (2-DG)	Not applicable.
<b>Decomposition temperature</b>	: 2-deoxyglucose (2-DG)	Not available.
	ImmunoCult™ Human CD3/CD28 T Cell Activator	Not available.



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

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

### Particle characteristics

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

## Section 10. Stability and reactivity

**10.1 Reactivity** : 2-deoxyglucose (2-DG) No specific test data related to reactivity available for this product or its ingredients.  
ImmunoCult™ Human CD3/CD28 No specific test data related to reactivity available for this product or its ingredients.  
T Cell Activator

**10.2 Chemical stability** : 2-deoxyglucose (2-DG) The product is stable.  
ImmunoCult™ Human CD3/CD28 The product is stable.  
T Cell Activator

**10.3 Possibility of hazardous reactions** : 2-deoxyglucose (2-DG) Under normal conditions of storage and use, hazardous reactions will not occur.  
ImmunoCult™ Human CD3/CD28 Under normal conditions of storage and use, hazardous reactions will not occur.  
T Cell Activator

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

**10.5 Incompatible materials** : 2-deoxyglucose (2-DG) May react or be incompatible with oxidizing materials.  
ImmunoCult™ Human CD3/CD28 May react or be incompatible with oxidizing materials.  
T Cell Activator

**10.6 Hazardous decomposition products** : 2-deoxyglucose (2-DG) Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
ImmunoCult™ Human CD3/CD28 Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
T Cell Activator

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Not available.

#### Sensitization

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 the likely routes of exposure** : 2-deoxyglucose (2-DG) Not available.  
ImmunoCult™ Human CD3/CD28 T Cell Activator Not available.

### Potential acute health effects

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

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

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

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

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

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

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

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

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

### Delayed and immediate effects and also 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.

## Section 11. Toxicological information

### Potential chronic health effects

<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

### 12.1 Toxicity

Not available.

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient ( $K_{oc}$ )** : Not available.

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA** : Not regulated.

**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

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed


#### SARA 302/304

##### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

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

##### Composition/information on ingredients

No products were found.

#### State regulations

**Massachusetts** : None of the components are listed.

## Section 15. Regulatory information

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

**California Prop. 65**

This product does not require a Safe Harbor warning under California Prop. 65.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** Not determined.

**New Zealand** : Not determined.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : Not determined.

**Thailand** : Not determined.

**Turkey** : Not determined.

**United States** : Not determined.

**Viet Nam** : Not determined.

## Section 16. Other information

**Procedure used to derive the classification**

Classification	Justification
Not classified.	

**History**

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

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

**Version** : 3.1

## Section 16. Other information

### Key to abbreviations

- : 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
- UN = United Nations

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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