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## MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet (MSDS) has been written in accordance with the European Union Council Directive 98/24/EC of 7th April on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual directive within the meaning of Article 16(1) of the Directive 89/391/EEC).

Commission Directive 2001/58/EC of 27<sup>th</sup> July 2001 amending for the second-time Directive 91/155/EEC defining and laying own the detailed arrangements for the system of information relating to dangerous preparations in implementation of Article 14 of the European Parliament Directive 1999/45/EC and relating to dangerous substances in Implementation of Article 27 of Council Directive 67/548/EEC (safety data sheets). (Text with EEA relevance). Appropriate risk and safety phrases are cited in this MSDS.

### **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

#### **1.1 Product identifiers**

Product name: instaCELL® TNF- $\alpha$  neutralization assay kit

Product Number: SF310-01

TNF- $\alpha$  Solution

**Recombinant Human TNF- $\alpha$**

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

The product is for research only and must not be used for diagnostic or therapeutic use.

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

acCELLerate GmbH

Osterfeldstraße 12-14

22529 Hamburg

Telephone: 040 33 464 73 00

Fax: 040 6337 0309

#### **1.4 Emergency telephone number**

Emergency Phone: 040 33 464 73 00

### **SECTION 2: Hazards identification**

#### **2.1 Classification of the substance or mixture**

##### **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

#### **2.2 GHS Label elements, including precautionary statements**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.H402

#### **2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

No components need to be disclosed according to the applicable regulations.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Not known.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

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**SECTION 6: Accidental release measures**

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

**6.2 Environmental precautions**

No special environmental precautions required.

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

Take up mechanically, placing in appropriate containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment:**

**Eye/face protection**

Sufficient eye protection should be worn.

Wear glasses with side protection.

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with

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applicable laws and good laboratory practices. Wash and dry hands.  
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

### **Body Protection**

Depending on the risk, wear a tight protective clothing or a suitable chemical protection suit.

### **Respiratory protection**

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

### **Control of environmental exposure**

No special environmental precautions required.

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- a) Appearance Form: solid
- b) Odor: No data available
- c) Odor Threshold: No data available
- d) pH: No data available
- e) Melting point/freezing point: No data available
- f) Initial boiling point and boiling range: No data available
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapor pressure: No data available
- l) Vapor density: No data available
- m) Relative density: No data available
- n) Water solubility: No data available
- o) Partition coefficient: No data available
- p) Auto-ignition temperature: No data available
- q) Decomposition temperature: No data available
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

### **9.2 Other safety information**

No data available

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

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**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

In the event of fire: see section 5

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

LD50 Oral No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

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**MATERIAL SAFETY DATA SHEET****SECTION 12: Ecological information****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

UN number: 3334 Class: 9 Packing group: III

Proper shipping name: Aviation regulated liquid, n.o.s. (Ethylene dimethacrylate)

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2 Chemical Safety Assessment**

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For this product a chemical safety assessment was not carried out

**SECTION 16 OTHER INFORMATION**

THE INFORMATION PRESENTED IN THIS DOCUMENT IS BELIEVED TO BE CORRECT BASED UPON DATA AVAILABLE TO ACCELERATE. USERS SHOULD MAKE AN INDEPENDENT DECISION REGARDING THE ACCURACY OF THIS INFORMATION BASED ON THEIR NEEDS AND DATA AVAILABLE TO THEM. ALL SUBSTANCES AND MIXTURES MAY PRESENT UNKNOWN HAZARDS AND ALL NECESSARY SAFETY PRECAUTIONS SHOULD BE TAKEN. ACCELERATE ASSUMES NO LIABILITY RESULTING FROM USING OR COMING IN CONTACT WITH THIS SUBSTANCE.

In the event of an accident involving exposure of a person to the material contained in the samples, contact acCELLerate during normal German working hours. Refer to section 1 for full contact details.

The above information is correct to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution.

The user should make independent assessments and decisions regarding the completeness of the information based on all sources available.

acCELLerate shall not be held liable for any damage resulting from handling or contact with the above product.

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name: instaCELL® TNF- $\alpha$  neutralization assay kit

Product Number: SF310-01

Actinomycin D solution

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

The product is for research only and must not be used for diagnostic or therapeutic use.

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

acCELLerate GmbH

Osterfeldstraße 12-14

22529 Hamburg

Telephone: 040 33 464 73 00

Fax: 040 6337 0309

**1.4 Emergency telephone number**

Emergency Phone: 040 33 464 73 00

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 2), H300

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360FD

**2.2 GHS Label elements, including precautionary statements**

Signal word Danger



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**MATERIAL SAFETY DATA SHEET****Hazard statement(s)**

H300 Fatal if swallowed.  
H350 May cause cancer.  
H360FD May damage fertility. May damage the unborn child.

**Precautionary statement(s)**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

Not known

**SECTION 3: Composition/information on ingredients****3.1 Mixture**

Synonyms: Actinomycin IV  
Actinomycin C1  
Dactinomycin  
Formula:  $C_{62}H_{86}N_{12}O_{16}$   
Molecular weight: 1.255,42 g/mol  
CAS-No.: 50-76-0  
EC-No.: 200-063-6

**SECTION 4: First aid measures****4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

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Wash off with soap and plenty of water. Consult a physician.

### **In case of eye contact**

Flush eyes with water as a precaution.

### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **4.2 Most important symptoms and effects, both acute and delayed**

May cause an allergic skin reaction

### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

No data available

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

Carbon oxides

Nitrogen oxides

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### **6.2 Environmental precautions**

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## MATERIAL SAFETY DATA SHEET

No special environmental precautions required.

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

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

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

No data available

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment:**

##### **Eye/face protection**

Sufficient eye protection should be worn.

Wear glasses with side protection.

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### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

### **Body Protection**

Depending on the risk, wear a tight protective clothing or a suitable chemical protection suit.

### **Respiratory protection**

In an emergency (e.g.: unintentional release of the substance) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Gas filter A, Color code brown.

Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

### **Control of environmental exposure**

No special environmental precautions required.

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- a) Appearance Form: powder
- b) Odor: No data available
- c) Odor Threshold: No data available
- d) pH: No data available
- e) Melting point/freezing point: 251-253°C
- f) Initial boiling point and boiling range: No data available
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapor pressure: No data available
- l) Vapor density: No data available
- m) Relative density: No data available
- n) Water solubility: 40g/l at 10°C
- o) Partition coefficient: log Pow: -9,100
- p) Auto-ignition temperature: No data available

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- q) Decomposition temperature: >240°C
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

**9.2 Other safety information**

No data available

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Strong oxidizing agents

**10.4 Conditions to avoid**

Heat. Keep away from direct sunlight.

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

In the event of fire: see section 5

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

LD50 Oral: 7,2mg/kg (Rat)

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

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**Respiratory or skin sensitization**

**Germ cell mutagenicity**

DNA Damage

**Carcinogenicity**

Presumed to have carcinogenic potential for humans

**Reproductive toxicity**

May damage the unborn child.

May damage fertility.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

<b>SECTION 12: Ecological information</b>
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**12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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**MATERIAL SAFETY DATA SHEET****12.6 Other adverse effects**

No data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

No data available

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 3462 IMDG: 3462 IATA: 3462

**14.2 UN proper shipping name**

ADR/RID: TOXINS EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (actinomycin D)

IMDG: TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (actinomycin D)

IATA: Toxins, extracted from living sources, solid, n.o.s. (actinomycin D)

**14.3 Transport hazard class(es)**

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

**14.4 Packaging group**

ADR/RID: II IMDG: II IATA: II

**14.5 Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

**14.6 Special precautions for user**

No data available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16 OTHER INFORMATION**

THE INFORMATION PRESENTED IN THIS DOCUMENT IS BELIEVED TO BE CORRECT BASED UPON DATA AVAILABLE TO ACCELERATE. USERS SHOULD MAKE AN INDEPENDENT DECISION REGARDING THE ACCURACY OF THIS INFORMATION BASED ON THEIR NEEDS AND DATA AVAILABLE TO THEM. ALL SUBSTANCES AND MIXTURES MAY PRESENT UNKNOWN HAZARDS AND ALL NECESSARY SAFETY PRECAUTIONS SHOULD BE TAKEN. ACCELERATE ASSUMES NO LIABILITY RESULTING FROM USING OR COMING IN CONTACT WITH THIS SUBSTANCE.

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The above information is correct to the best of our knowledge. All materials and mixtures may present unknown hazards and should be used with caution.

The user should make independent assessments and decisions regarding the completeness of the information based on all sources available.

acCELLerate shall not be held liable for any damage resulting from handling or contact with the above product.

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