

# SAFETY DATA SHEET

SDS DATE: December 11, 2020



## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Recombinant Mouse Activin A  
**PRODUCT CODES:** Cat# 4725-10, -100, -1000  
**RESTRICTIONS ON USE:** For laboratory research purposes. Not for drug or household use.  
**MANUFACTURER:** BioVision, Inc.  
**ADDRESS:** 155 S. Milpitas Boulevard, Milpitas, CA 95035  
**EMERGENCY PHONE:** 858-373-8066  
**OTHER CALLS:** 408-493-1800  
**FAX PHONE:** 408-493-1801

## SECTION 2: HAZARDS IDENTIFICATION

Product Name/Chemical Name	Description	Volume	Safety Information
Recombinant Mouse Activin A	Contains TFA	4725-10: 10 µg 4725-100: 100 µg 4725-1000: 1 mg	See below

### Trifluoroacetic acid (TFA):

#### Emergency Overview:

**GHS Classification**  
Acute toxicity, Inhalation (Category 4), H332  
Skin corrosion (Category 1A), H314  
Serious eye damage (Category 1), H318  
Long-term (chronic) aquatic hazard (Category 3), H412

#### GHS Label elements, including precautionary statements



#### Pictogram:

#### Signal word:

#### Hazard statement(s):

Danger  
H314 Causes severe skin burns and eye damage.  
H332 Harmful if inhaled.

#### Precautionary statement(s):

H412 Harmful to aquatic life with long lasting effects.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P363 Wash contaminated clothing before reuse.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### HMIS Classification

##### Health hazard:

##### Flammability:

##### Physical hazards:

#### NFPA Rating

##### Health Hazard:

##### Fire:

##### Reactivity Hazard:

#### Potential Health Effects

**Inhalation:** May be harmful by inhalation. Material may be irritating to the mucous membranes and upper respiratory tract.

**Skin:** Harmful if absorbed through skin. May cause skin irritation.

**Eyes:** Cause eye irritation.

**Ingestion:** Harmful if swallowed.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	EC-No.	Molecular Weight	Chemical Formula	Concentration
Trifluoroacetic acid (TFA)	76-05-1	200-929-3	114.02	CF <sub>3</sub> COOH	<0.1%

## SECTION 4: FIRST AID MEASURES

**General advice:** First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air. Call in physician.

**In case of skin contact:** In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

**In case of eye contact:** After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

**If swallowed:** After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

## SECTION 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Unsuitable extinguishing media:** For this substance/mixture no limitations of extinguishing agents are given.

**Special protective equipment for fire fighters:** Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Special hazards arising from the substance or mixture:** Carbon oxides, Hydrogen fluoride, Combustible.. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

**Further information:** Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

**Environmental precautions:** Do not let product enter drains.

**Methods for cleaning up:** Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:** Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

**Conditions for safe storage:** Tightly closed. hygroscopic Store under inert gas. Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Exposure Controls

##### Engineering controls (Ventilation etc.)

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### Personal protective equipment

##### Respiratory protection

Required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

##### Hand protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de))

##### Body protection

Lab coat

##### Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

##### Work/Maintenance Practices

Do not take internally.

Facilities storing or utilizing this material should be equipped with an eye wash and a safety shower.

Wash thoroughly after handling

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## Hygiene measures

General industrial hygiene practice.

## Control of environmental exposure

Do not let product enter drains.



## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Trifluoroacetic acid (TFA)
Appearance and Odor:	Clear liquid
pH:	1 at 10 g/l
Water Solubility:	10,000 g/l - US-EPA - soluble
Other Solubility:	No data available
Boiling Point (°C):	72.4 °C 162.3 °F - lit.
Melting Point (°C):	-15.4 °C (4.3 °F) - lit.
Flash Point (°C):	> 100 °C (> 212 °F) - Pensky-Martens closed cup - ISO 2719
Ignition Temperature (°C):	No data available
Density:	1.489 g/cm3 at 20 °C (68 °F) - lit.
Flammability (solid, gas)	No data available
Explosive limits	LEL: No data UEL: No data
Vapor pressure (vs. Air or mmHg)	No data available
Vapor Density (vs. Air = 1)	No data available
Specific Gravity (Water = 1)	No data available
Octanol/Water Partition	No data available
Decomposition Temperature	No data available
Viscosity	No data available

## SECTION 10: STABILITY AND REACTIVITY

Property	Trifluoroacetic acid (TFA)
Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	stable under standard ambient conditions (room temperature) .
Polymerization	Will not occur
Conditions to avoid:	Strong heating
Materials to avoid:	Strong bases, Metals, Oxidizing agents, Alcohols, Epoxides, Steel (all types and surface treatments), Aluminum, Exothermic in contact with water, Reacts violently with: Alkali metals
Hazardous decomposition products:	Risk of explosion with: lithium aluminium hydridehydrides, Exothermic reaction with: alkalines Ammonia Generates dangerous gases or fumes in contact with: acids

## SECTION 11: TOXICOLOGICAL INFORMATION

### Trifluoroacetic acid (TFA):

**Acute toxicity:** No data available.

Symptoms: Nausea, Vomiting, strong pain (risk of perforation!), If ingested, severe burn of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

LC50 Inhalation - Rat - 4 h - 10.01 mg/l

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Inhalation: Corrosive to respiratory system.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract.

Dermal: No data available

**Skin corrosion/irritation:** Skin – Rabbit; Result: Causes severe burns.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Necrosis Causes poorly healing wounds.

**Serious eye damage/eye irritation:** Causes serious eye damage.

**Respiratory or skin sensitization:** No data available

**Germ cell mutagenicity:** Ames test; Salmonella typhimurium; Result: negative

In vitro mammalian cell gene mutation test; mouse lymphoma cells; Result: negative

Chromosome aberration test in vitro; Human lymphocytes; Result: negative

### Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** No data available

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** . No data available

Acute oral toxicity - Nausea, Vomiting, strong pain (risk of perforation!), If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract.

**Specific target organ toxicity – repeated exposure (GHS):** No data available

**Aspiration hazard:** No data available

## Potential Health Effects

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Skin:** Harmful if absorbed through skin. May cause skin irritation.

**Eyes:** May cause eye irritation.

**Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## Additional Information

RTECS: AJ9625000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Damage to:Kidney, Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

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## SECTION 12: ECOLOGICAL INFORMATION

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### Trifluoroacetic acid (TFA):

**Persistence and degradability:** Biodegradability aerobic - Exposure time 127 d

Result: 11 % - Not inherently biodegradable. (OECD Test Guideline 301D)

**Toxicity:** Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 999 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphniaand other aquatic invertebrates; static test EC50 - Daphnia magna (Water flea) - > 999 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 237.07 mg/l -72 h; (OECD Test Guideline 201)

Toxicity to bacteria EC50 - activated sludge - > 832 mg/l - 3 h; (OECD Test Guideline 209)

**Bioaccumulative potential:** No bioaccumulation is to be expected (log Pow <= 4).

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### Waste disposal method:

**Product:** Waste material must be disposed of in accordance with the national and loc No mixing with other waste. Handle uncleaned containers like the product See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: TRANSPORT INFORMATION

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### Trifluoroacetic acid (TFA):

**Land transport (DOT (US):** UN number: 2699 Class: 8 Packing group: I Proper shipping name: Trifluoroacetic acid

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

**IMDG:** UN number: 2699 Class: 8 Packing group: I EMS-No: F-A, S-B Proper shipping name: TRIFLUOROACETIC ACID

**IATA:** UN number: 2699 Class: 8 Packing group: I Proper shipping name: Trifluoroacetic acid

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## SECTION 15: REGULATORY INFORMATION

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### Trifluoroacetic acid (TFA):

**SARA 302 Components:** SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

**SARA 311/312 Hazards:** TFA: Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components:** No data available.

**New Jersey Right To Know Components:** No data available.

**California Prop. 65 Components:** No data available.

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## SECTION 16: OTHER INFORMATION

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### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.