

SAFETY DATA SHEET

SDS DATE: Mar 03, 2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Plasminogen Activator Inhibitor-1 Activity Assay Kit (C)

PRODUCT CODES: Cat# K2040-100

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

CHEMTREC PHONE:

OTHER CALLS: 408-493-1800

FAX PHONE: 408-493-1801

SECTION 2: HAZARDS IDENTIFICATION

| Component | Description | Volume | Safety Information |
|-------------------------------|-------------------------------------------|---------|--------------------|
| PAI-1 Assay Buffer | Liquid | 25 ml | No hazards |
| PAI-1 Acidify Buffer | Liquid | 5 ml | No hazards |
| PAI-1 Stop Buffer | Liquid (contains Guanidine hydrochloride) | 5 ml | See below |
| Human tPA | -- | 1 vial | No hazards |
| Plasminogen | Lyophilize | 1 vial | No hazards |
| PAI-1 Substrate Mix | Lyophilize (Contains D-Val-Leu-Lys-pNA) | 1 vial | See below |
| Clear 96-well half area plate | -- | 1 plate | No hazards |

Guanidine hydrochloride:

Emergency Overview

GHS Classification: Acute toxicity, Oral (Category 4), H302
Skin Corrosion/Irritation (Category 2), H319
Serious eye damage (Category 2), H315

GHS Label elements, including precautionary statements



Pictogram:

Signal word: Warning

Hazard statement(s): H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes severe eye irritation.

Precautionary statement(s): P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water/...
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311: Immediately call a POISON CENTER/doctor
P314: IF exposed or concerned: Call a POISON CENTER/doctor/...

HMIS Classification

Health hazard: 2
Chronic health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 2
Fire: 0
Reactivity Hazard: 0

D-VAL-LEU-LYS-PNA:

Emergency Overview

GHS Classification: Acute toxicity, Oral (Category 4)
Skin Corrosion/Irritation (Category 2)
Serious eye damage (Category 2)
Toxic to Reproduction (Category 2)
Target organ systemic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram:



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Signal word: Warning
Hazard statement(s): H302 Harmful if swallowed.
H318 Causes skin irritation.
H319 Causes severe eye irritation.
H361 Suspected of damaging fertility of the unborn child
H335 May cause respiratory irritation.
Precautionary statement(s): P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash hands thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe dust fume gas mist vapours spray
P301+P312: IF SWALLOWED: Call a POISON CENTER/ doctor/.../if you feel unwell.
P330: Rinse mouth.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses if present and easy to do. continue rinsing.
P310: Immediately call a POISON CENTER/doctor
P314: Get Medical advice/attention if you feel unwell.

HMIS Classification

Health hazard: 3
Chronic health hazard: *
Flammability: 0
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 0
Reactivity Hazard: 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Product Name/Chemical Name | CAS Number | EC-No. | MW | Chemical Formula | Concentration |
|----------------------------|------------|--------|--------|-------------------------------------------------------------------------------|---------------|
| Guanidine hydrochloride | 50-01-1 | -- | 95.53 | CH ₅ N ₃ .HCl | <25% |
| D-VAL-LEU-LYS-PNA | 62354-43-2 | -- | 551.51 | C ₂₃ H ₄₀ Cl ₂ N ₆ O ₅ | <3% |

SECTION 4: 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: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5: FIRE-FIGHTING MEASURES

Conditions of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous combustion products formed under fire conditions – no data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

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

Recommended storage temperature: -20 °C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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Contains no substances with occupational exposure limit values.



Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

By short-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0.12 mm

Breakthrough time (maximum wearing time): > 480 min

By long-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0.38 mm

Breakthrough time (maximum wearing time): > 480 min

Eye protection

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

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| Property | Guanidine hydrochloride | D-VAL-LEU-LYS-PNA |
|----------------------------|---------------------------------|-----------------------|
| Appearance: | Solid | White to yellow solid |
| pH: | 4.5-5.5 (100 g/l; H2O; 20 °C) | No data available |
| Water Solubility: | 2,150 g/l (20 °C) | No data available |
| Other Solubility: | No data available | ~50 mg/ml Water |
| Specific Gravity (g/ml): | No data available | No data available |
| Boiling Point (°C): | No data available | No data available |
| Melting Point (°C): | 185 °C | No data available |
| Flash Point (°C): | No data available | No data available |
| Ignition Temperature (°C): | No data available | No data available |
| Density | 1.354 g/cm ³ (20 °C) | No data available |

SECTION 10: STABILITY AND REACTIVITY

| Property | Guanidine hydrochloride | D-VAL-LEU-LYS-PNA |
|-----------------------------------|---------------------------------------------|-------------------------------------------------|
| Chemical stability | Stable under recommended storage conditions | |
| Conditions to avoid: | No data available | No data available |
| Materials to avoid: | No data available | Strong oxidizing agents, acids, acid anhydrides |
| Hazardous decomposition products: | No data available | No data available |

SECTION 11: TOXICOLOGICAL INFORMATION

Guanidine hydrochloride:

Acute effects:

Acute oral toxicity: LD50: > 475 mg/kg - Rat - (RTECS)

Acute dermal toxicity: LD50: < 2000 mg/kg - Rabbit - (RTECS)

Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available **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

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

Aspiration hazard: no data available

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

Synergistic effects: no data available

Additional information: no data available

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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.

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

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

Aspiration hazard: no data available

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

Synergistic effects: no data available

Additional information: no data available

SECTION 12: ECOLOGICAL INFORMATION

Guanidine hydrochloride:

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

D-VAL-LEU-LYS-PNA:

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

D-VAL-LEU-LYS-PNA:

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

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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: 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: D-VAL-LEU-LYS-PNA, CAS-No. 62354-43-2

New Jersey Right To Know Components: D-VAL-LEU-LYS-PNA, CAS-No. 62354-43-2

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

| Component | Risk Phrases | Safety Phrases |
|-------------------------|-----------------------|--------------------------|
| Guanidine hydrochloride | R22, R37/38, R40, R53 | S22, S24/25 S36/37/39 |
| D-VAL-LEU-LYS-PNA | R22, R34, R63 | S22, S26, S36/37/39, S45 |

SECTION 16: OTHER INFORMATION

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.