

SAFETY DATA SHEET (SDS)



Product Name: pLIVE® Vector Complete System

Product Number: MIR 5320, MIR 5420, MIR 5520, MIR 5620

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1. PRODUCT AND COMPANY IDENTIFICATION

1.1. **Product Name:** pLIVE® vector(s)

1.2. **Product Numbers:** MIR 5320, 5420, 5520, 5620

1.3. **Identified Product Use:** For research use only

1.4. **Supplier Details:**

1.4.1. **Company:** Mirus Bio LLC, 545 Science Drive, Madison, WI 53711, USA

1.4.2. **Telephone:** 888.530.0801 (Toll Free within the U.S.) or +1.608.441.2852

1.4.3. **Fax:** +1.608.441.2849

1.4.4. **Emergency Phone No.:** US and Canada: 1.800.633.8253; International: +1.801.629.0667

1.5. **Precautionary Labeling:** The components of pLIVE® vectors (< 0.1% by weight) are potentially harmful, although the chemical, physical, and toxicological properties have not been thoroughly investigated by Mirus Bio LLC. The pLIVE vector series is supplied in a modified TE buffer (10 mM Tris pH 7.5, 0.1 mM EDTA). This Safety Data Sheet is intended to provide general guidelines about its use. Handle with care, and practice safe laboratory techniques.

2. HAZARDS IDENTIFICATION

2.1. **Classification of the substance or mixture:**

| Chemical Name | CAS-No | EINECS-No | Common Name(s) | Weight % |
|--|-----------|-----------|--|----------------|
| Tris(hydroxymethyl)-aminomethane | 77-86-1 | 201-064-4 | Tris | 0.15-0.25% w/v |
| Ethylenediaminetetraacetic acid disodium salt dihydrate (EDTA) | 6381-92-6 | 205-358-3 | (Ethylenedinitrilo) tetraacetic acid, disodium salt dihydrate; Disodium edetate dihydrate; EDTA, disodium salt dihydrate | 0.03-0.05% w/v |
| Water | 7732-18-5 | 231-791-2 | n/a | 100% v/v |

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

CAS-No. 77-86-1 only:

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Other components: Not classified as hazardous substance or mixture.

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. **GHS label elements, including precautionary statements:**

CAS-No. 77-86-1:



Pictogram

Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

Precautionary statement(s)

P264

P280

P302+P352

P305+P351+P338

P332+P313

P337+P313

P362

Wash skin thoroughly after handling.

Wear protective gloves/ eye protection/ face protection.

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

2.3. Other Hazards which do not result in the classification or are not covered by GHS: None**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances (Mixtures)**

| Chemical Name | CAS-No | EINECS-No | Common Name(s) | Weight % |
|--|-----------|-----------|---|----------------|
| Tris(hydroxymethyl)-aminomethane | 77-86-1 | 201-064-4 | Tris | 0.15-0.25% w/v |
| Ethylenediaminetetraacetic acid disodium salt dihydrate (EDTA) | 6381-92-6 | 205-358-3 | (Ethylenedinitrilo)tetraacetic acid, disodium salt dihydrate; Disodium edetate dihydrate; EDTA, disodium salt dihydrate | 0.03-0.05% w/v |
| Water | 7732-18-5 | 231-791-2 | n/a | 100% v/v |

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance: None

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

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

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms/effects, acute and delayed

See sections 2 and 11 (hazard and toxicological information) for the most important symptoms and effects.

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

No data available

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Suitable Extinguishing media

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

5.1.2. Unsuitable extinguishing media: None

5.2. Specific hazards arising from the substance or mixture

CAS-No. 77-86-1: Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas

CAS-No. 6381-92-6: Carbon oxides, nitrogen oxides (NO_x), Sodium oxides

5.3. Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary

5.4. Further information: None

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, refer to section 8.

6.2. Environmental precautions

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

6.3. Methods and Materials for Containment and cleaning up

Soak up with inert absorbent material (e.g. vermiculite, sand or earth), and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4. References to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid inhalation of vapor or mist. Avoid contact with skin and eyes. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters e.g. occupational exposure limit values or biological limit values.

Contains no substances with occupational exposure limit values.

8.2. Appropriate engineering controls.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures, such as personal protective equipment.

| | |
|------------------------------------|--|
| Personal protective equipment: | Avoid all unnecessary exposure. |
| Materials for protective clothing: | Wear appropriate protective gloves to prevent skin exposure |
| Hand protection: | Always wear gloves. |
| Eye protection: | Tightly fitting safety glasses with side shields. |
| Skin and body protection: | Protective clothing. |
| Respiratory protection: | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Other information: | Do not allow product to enter drains. |

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1. **Appearance (physical state, color etc.):** Form: liquid
Color: colorless
- 9.2. **Odor:** No data available
- 9.3. **Odor threshold:** No data available
- 9.4. **pH:** 7.5
- 9.5. **Melting point/freezing point:** No data available
- 9.6. **Initial boiling point and boiling range:** No data available
- 9.7. **Flash point:** No data available
- 9.8. **Evaporation rate:** No data available
- 9.9. **Flammability (solid, gas):** No data available
- 9.10. **Upper/lower flammability or explosive limits:** No data available
- 9.11. **Vapor pressure:** No data available
- 9.12. **Vapor density:** No data available
- 9.13. **Relative density:** No data available
- 9.14. **Solubility(ies):** water soluble
- 9.15. **Partition coefficient:** No data available
- 9.16. **Auto-ignition temperature:** No data available
- 9.17. **Decomposition temperature:** No data available
- 9.18. **Viscosity:** No data available
- 9.19. **Other information:** No data available

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:** No data available
- 10.4. **Conditions to avoid (e.g. static discharge, shock or vibration):** No data available
- 10.5. **Incompatible materials:** Bases, Oxidizing agents, Strong oxidizing agents
- 10.6. **Hazardous decomposition products:** No data available. In the event of a fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

| Component | CAS-No. | LD50 Oral | LD50 Dermal |
|--|-----------|---------------------|---------------------|
| Tris(hydroxymethyl)-aminomethane | 77-86-1 | > 3,000 mg/kg (rat) | > 5,000 mg/kg (rat) |
| Ethylenediaminetetraacetic acid disodium salt dihydrate (EDTA) | 6381-92-6 | > 2,000 mg/kg (rat) | 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.

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

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: None

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity (aquatic and terrestrial, where available): No data available

12.2. Persistence and degradability: No data available

12.3. Bioaccumulative potential: No data available

12.4. Mobility in the soil: No data available

12.5. Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Recommendations:

Remove waste in accordance with local and/or national regulations. Hazardous waste should not be mixed with other waste or different types of hazardous waste if mixing leads to pollution or increased difficulty in properly disposing of the waste. All entities that store, transport or handle hazardous waste should take the necessary measures to prevent risks of pollution or damage to people or animals.

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

14. TRANSPORT INFORMATION

- 14.1. **UN number:** Not regulated as a hazardous material
- 14.2. **UN proper shipping name:** Not regulated as a hazardous material
- 14.3. **Transport hazard class(es):** Not regulated as a hazardous material
- 14.4. **Packing group, if applicable:** Not regulated as a hazardous material

Special precautions which a user needs to be aware of, or needs to comply with, in connection with the transport or conveyance within or outside their premises: This product is not classified as hazardous according to DOT, IMDG, and IATA regulations.

15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations specific for the product in question:

SARA 302/313 Components

SARA 302: This material is not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute health hazards

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

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

HMIS Rating

| | |
|------------------------|---|
| Health hazard: | 0 |
| Chronic Health Hazard: | * |
| Flammability: | 0 |
| Physical Hazard | 0 |

NFPA Rating

| | |
|--------------------|---|
| Health Hazard: | 0 |
| Fire Hazard: | 0 |
| Reactivity Hazard: | 0 |

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