

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

1. IDENTIFICATION

Product Name	Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors
Recommended use of the chemical and restrictions on use	
Identified uses	
Restrictions on use	For research use only Use as directed
Company Identification	Vigene Biosciences
Customer Information Number	vigenebio.com custsupport@vigenebio.com
Emergency Telephone Number	
CHEMTREC Number	USA: 800-424-9300 EU: 202-483-7616
Issue Date	March 28 th 2018
Supersedes Date	This is the first issue

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification

This product CANNOT be classified in accordance with the Globally Harmonized System of Classification and Labelling (GHS) as it is a biological material and is outside the scope of this system. The toxicological properties of this material have not been fully investigated.

As with any chemical product of unknown toxicity, take precautions to prevent contact with eye, skin and mucous membranes. Use good industrial hygiene practices to prevent accidental exposure. Product should only be handled by technically qualified individuals who are educated in handling chemicals of unknown toxicity.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

This product should be handled as a biohazardous material under Biosafety Level 1 guidelines. Contact your local institutional biosafety office for accurate regional information.

Label Elements

Hazard Symbols
Not applicable

Signal Word: Not applicable

Hazard Statements

None

Precautionary Statements

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, eye protection, face protection, and protective clothing. Contaminated clothing must not be allowed out of the workplace.

Response

If on skin: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.

Storage

Store locked up. Store in accordance with Biosafety Level 1 guidelines.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Disposal

Dispose of contents/container in accordance with manufacturer's instructions.
(See Section 13 of this SDS.)

Other Hazards

Replication-defective recombinant adeno-associated viral (rAAV) vectors are not known to cause disease in humans or animals.

rAAV will enter mammalian cells and can remain in episomal form in non-dividing cells. In the presence of adenovirus (or other helper viruses) and wild-type AAV the rAAV can integrate into host cell chromosome and be shed from host.

Therefore, caution should be used when using rAAV vectors in combination with helper viruses and wild-type AAV.

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	<5%
Acute dermal toxicity	<5%
Acute inhalation toxicity	<5%
Acute aquatic toxicity	<5%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component

Virus particle

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water, also under the eyelids, for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Skin

Wash affected area with plenty of soap and water. Seek medical attention if symptoms persist.

Ingestion

Do not induce vomiting. Obtain medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media

Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers.

Specific hazards arising from the chemical

None known.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Methods and materials for containment and cleaning up

Contain spill and decontaminate the area using a disinfectant such as chlorine bleach (10% f.c.), Wescodyne, or detergent-based disinfectant.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle as a biohazardous material under Biosafety Level 1 guidelines. Wear appropriate protective equipment when handling. Do not eat or drink while handling this material. Avoid contact with eyes, skin and clothing.

Conditions for safe storage

Store at -80°C to maintain product integrity. Storage area should be: cool - dry - well ventilated - out of direct sunlight - away from sources of ignition(heat, sparks, flames, pilot lights) - away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Virus Particle

None established.

Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protection measures

Respiratory Protection

Wear respiratory protection if there is a risk of exposure. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Skin Protection

Gloves

Eye/Face Protection

Safety glasses

Body Protection

Laboratory coat

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

	Physical State	Liquid
	Color	Colorless
Odor		None
Odor Threshold		Not applicable
pH		7.4
Specific Gravity		No data available
Boiling Range/Point (°C/F)		~100/212
Melting Range/Point (°C/F)		~0/32
Flash Point (PMCC) (°C/F)		Not flammable
Vapor Pressure		No data available
Evaporation Rate (BuAc=1)		No data available
Solubility in Water		Complete
Vapor Density (Air = 1)		No data available
VOC (g/l)		No data available
Partition coefficient (n-octanol/water)		No data available
Viscosity		No data available
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available
Upper explosive limit		No data available
Lower explosive limit		No data available
Flammability (solid, gas)		Not applicable

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

10. STABILITY AND REACTIVITY

Reactivity

No known reactivity.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Heat – high temperatures

Incompatible Materials

None known

Hazardous Decomposition Products

None known

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

No data available.

Specific Target Organ Toxicity (STOT) – single exposure

No data available.

Specific Target Organ Toxicity (STOT) – repeat exposure

No data available.

Serious Eye damage/Irritation

No data available.

Skin Corrosion/Irritation

No data available.

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Respiratory or Skin Sensitization

No data available.

Carcinogenicity

This product has not been evaluated in animal carcinogenicity studies and is not listed on the NTP, IARC or OSHA database.

Germ Cell Mutagenicity

This product has a very low probability of integrating into the host genome. This integration is not- random.

Reproductive Toxicity

No data available.

Aspiration Hazard

Available data indicates this product is not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No relevant studies identified.

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

Dispose of viral stocks by autoclaving at 121°C for 30-45 minutes.

Dispose of infected liquid cultures by decontamination with chlorine bleach (10% f.c.) for 10 minutes and then dispose of in sink.

Dispose of infected animal carcasses or tissues by incineration. Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains ingredients that have not been verified for listing on the US EPA Toxic Substance Control Act Chemical Substance Inventory. Therefore, this product is restricted to research and development purposes only.

Canada DSL Inventory

All components of this product have not been verified for inclusion on the Domestic Substance List (DSL).

SARA Title III Sect. 311/312 Categorization

Acute (Immediate)

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: None

California Proposition 65

This product does not contain any chemicals which the State of California has found to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

SAFETY DATA SHEET

Replication-Defective Recombinant Adeno-Associated Viral (rAAV) Vectors

CAS: Chemical Abstracts Service

ECHA: European Chemicals Agency

IARC: International Agency for Research on Cancer

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

SDS: Safety Data Sheet

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

The information and recommendations presented in this SDS are based on sources believed to be accurate. Vigene Biosciences assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.