

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	ARFGEF2 Human Gene Knockout Kit (CRISPR)
Product Number	KN416885
Brand	OriGene Technologies, Inc.

1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company	OriGene Technologies, Inc.
	9620 Medical Center Drive, Suite 200
	Rockville, MD 20850, USA
Telephone	+1 301.340.3188
Fax	+1 301.340.8606

1.4 Emergency telephone number

Emergency Phone # + 240.620.0267

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture Not a hazardous substance or mixture.

- **2.2 GHS Label elements, including precautionary statements** Not a hazardous substance or mixture.
- **2.3** Hazards not otherwise classified (HNOC) or not covered by GHS Not a hazardous substance or mixture.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

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

4. FIRST AID MEASURES

4.1 **Description of first aid measures**

If inhaled

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

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.

4.2 Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed 4.3 No data available

FIREFIGHTING MEASURES 5.

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 Nature of decomposition products not known.

5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

5.4 **Further information** No data available

ACCIDENTAL RELEASE MEASURES 6.

6.1 Personal precautions, protective equipment and emergency procedures Avoid breathing vapors, mist or gas. 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 Keep in suitable, closed containers for disposal.
- 6.4 **Reference to other sections** For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

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. Storage class (TRGS 510): 13 Non-combustible solid

7.3 Specific end use(s)

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

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 General industrial hygiene practice. Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). 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. Body Protection Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure No special environmental precautions required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Form: lyophilized solid
Odor	No data available
Odor Threshold	No data available
рН	No data available
Melting point / freezing point	No data available
Initial boiling point & range	No data available
Flash point	No data available
Evaporation point	No data available
Flammability (solid/gas)	No data available
Upper/lower Flammability limits	No data available
Vapor pressure	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient (octanol/water)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

- **10.1 Reactivity** No data available
- 10.2 Chemical stability
 Stable under recommended storage conditions.

 10.2 Describility of becaudeus use sticks.
- **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 Other decomposition products - No data available In the event of fire: See section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation

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

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

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

RTECS: Not available

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

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 PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not regulated as a dangerous good

IMDG

Not regulated as a dangerous good

ΙΑΤΑ

Not regulated as a dangerous good

15. **REGULATORY INFORMATION**

SARA 302 Components

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

SARA 313 Components

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

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know Components

No components are subject to the New Jersey Right to Know Act.

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.

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex X.

16. OTHER INFORMATION

HMIS Rating

0	
Health hazard:	
Chronic Health Hazard:	
Flammability:	
Physical Hazard:	0
NFPA Rating	
Health hazard:	
Fire Hazard:	0
Reactivity Hazard:	

Further information

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COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Preparation Information

OriGene Technologies, Inc. Safety Office Revision: 3.1 Revision Date: 04/02/2024