

## **SAFETY DATA SHEET**

Date Revised: Sep 7, 2021

### **SECTION 1: Product and Company Identification**

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [TUNEL Equilibration Buffer]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

### **SECTION 2: Hazards identification**

**Classification according to Regulation (EC) No 1272/2008[CLP]**

Acute toxicity 4, Acute toxicity 2, Carcinogen 1A, Aquatic acute 1, Aquatic chronic 1

Acute Toxicity. 4, Skin Sensitizer. 1, Respiratory Sensitizer 1, Mutagenicity 2, Carcinogenicity 1B, Reproductive Toxicity 1B

**Classification according to Directive 1999/45/EC**

None

**Labeling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram**

GHS06 Skull and Crossbones, GHS08 Health Hazard, GHS09 Environment

**Signal word** Danger

**Hazard statements**

H301 Toxic if swallowed, H302 Harmful if swallowed, H317 May cause an allergic skin reaction, H330 Fatal if inhaled, H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled, H341 Suspected of causing genetic defects, H350 May cause cancer, H360 May damage fertility or the unborn child, H400 Very toxic to aquatic life, H410 Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P264 Wash skin thoroughly after handling, P270 Do not eat, drink or smoke when using this product, P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician, P330 Rinse mouth, P405 Store locked up, P501 Dispose of contents/container to hazardous chemical waste, P260 Do not breathe dust/fume/gas/mist/vapours/spray, P271 Use only in a well-ventilated area, P284 Wear respiratory protection, P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing, P310 Immediately call a POISON CENTER or doctor/physician, P403+P233 Store in a well-ventilated place and keep container tightly closed, P201 Obtain special instructions before use, P202 Do not handle until all safety precautions have been read and understood, P281 Use personal protective equipment as required, P308+P313 IF exposed or concerned: Get medical advice/attention, P272 Contaminated work clothing should not be allowed out of the workplace, P273 Avoid release to the environment, P280 Wear protective gloves/protective clothing/eye protection/face protection, P391 Collect spillage. Hazardous to the aquatic environment. P302+P352 IF ON SKIN: wash with plenty of soap and water, P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse, P285 In case of inadequate ventilation wear respiratory protection, P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing, P342 + P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician, P405 Store locked up.

**HMIS Classification**

Health hazard: 3

# US EVERBRIGHT

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health hazard: 3

Fire: 0

Reactivity Hazard: 0

## SECTION 3: Composition/information on ingredients

Name	CAS No.	EC No.	Index No.	Weight%	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Sodium cacodylate (cacodylic acid, dimethylarsenic acid)	75-60-5	200-883-4	N/A	3%	Acute Tox. 4 * Acute Tox. 2 Carc. 1A Aquatic Acute 1 Aquatic Chronic 1	N/A
Cobalt(II) Chloride (cobalt dichloride)	7646-79-9	231-589-4	027-004-00-5	<0.1%	Acute Tox. 4 * Carc. 1B Skin Sens. 1 Resp. Sens. 1 Muta. 2 Carc. 1B Repr. 1B Aquatic Acute 1 Aquatic Chronic 1	Carc. 1B Acute Tox. 4 * Resp. Sens. 1 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1

## 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

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Flush eyes with water as a precaution.

### If swallowed

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

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

### Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling and storage

### Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

### Conditions for safe storage

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

Store at -20°C.

## SECTION 8: Exposure controls/personal protection

### Components with workplace control parameters

Substance Cobalt dichloride

CAS no. 7646-79-9

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	-	-	-	-	-	-
Limit value, short term	-	-	-	-	-	-

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	-	-	-	-	0.02mg/m <sup>3</sup>	-	-
Limit value, short term	-	-	-	-	-	-	-

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	-	-	-	-	-	-	-
Limit value, short term	-	-	-	-	-	-	-

### Personal protective equipment

#### 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.

#### Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### 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

Chemical Name	TUNEL Equilibration Buffer
Appearance	Liquid
Odor	No data available
Odor threshold	No data available
pH	6.6
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Water soluble
Partition coefficient:n-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

## SECTION 10: Stability and reactivity

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Oxidizing agents, Alkali metals, Strong bases

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sodium oxides, Arsenic oxides Hydrogen chloride gas, Cobalt/cobalt oxides

Other decomposition products - no data available

## SECTION 11: Toxicological information

### Acute toxicity

**Oral LD50** Sodium cacodylate : rat - 644 mg/kg; cobalt dichloride: 418 mg/kg

**Inhalation LC50** None

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**Dermal LD50** None

**Other information on 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** Sodium cacodylate, cobalt dichloride: Laboratory experiments have shown mutagenic effects.

## **Carcinogenicity**

Carcinogenicity - mouse – Oral (Dimethylarsinic acid)

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. (Dimethylarsinic acid)

IARC: 1 - Group 1: Carcinogenic to humans (Dimethylarsinic acid); IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

2B - Group 2B: Possibly carcinogenic to humans (Dimethylarsinic acid), 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

IARC: 1 - Group 1: Carcinogenic to humans (Dimethylarsinic acid)

2B - Group 2B: Possibly carcinogenic to humans (Dimethylarsinic acid)

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.

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**

Reproductive toxicity - mouse - Oral

Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. (Dimethylarsinic acid)

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct. Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females) (Cobalt dichloride).

May damage fertility.

## **Teratogenicity**

May cause congenital malformation in the fetus. (Dimethylarsinic acid)

## **Specific target organ toxicity - single exposure (Globally Harmonized System)**

Inhalation - May cause respiratory irritation. (Dimethylarsinic acid)

## **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

## **Aspiration hazard**

no data available

## **Potential health effects**

**Inhalation** Toxic if inhaled. Causes respiratory tract irritation. (Dimethylarsinic acid)

**Ingestion** Toxic if swallowed. (Dimethylarsinic acid)

**Skin** May be harmful if absorbed through skin. Causes skin irritation. (Dimethylarsinic acid)

**Eyes** Causes eye irritation. (Dimethylarsinic acid)

## **Aggravated**

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## Medical Condition

Cacodylic acid may be partially reduced to inorganic arsenic in the body, Exposure to arsenic compounds can cause: burning, dry nose, dry mouth, Muscle cramps/spasms,

May cause irritation of the Gastrointestinal tract, Vomiting, Nausea, Diarrhea, Shock, Death.

## Signs and Symptoms of Exposure

Drowsiness, Tremors, Convulsions, dry mouth, metallic taste, loss of appetite, respiratory difficulties, garlic-like breath odor, garlic-like perspiration (Dimethylarsinic acid). Blood disorders, Cough, Shortness of breath, Headache, Nausea, Vomiting (Cobalt dichloride).

## Synergistic effects

no data available

## Additional Information

RTECS: CH7525000 (Dimethylarsinic acid)

RTECS: GF9800000 (Cobalt dichloride)

## SECTION 12: Ecological information

**Toxicity** Sodium cacodylate: Toxicity to fish LC50 - Lepomis macrochirus - > 180 mg/l - 96 h Cobalt dichloride: Toxicity to fish LC50 - Cyprinus carpio (Carp) - 0.33 mg/l - 96 h Cobalt dichloride: Toxicity to daphnia and other aquatic invertebrates mortality NOEC - Daphnia - < 0.05 mg/l - 7 d EC50 - Daphnia magna (Water flea) - 1.1 -1.6 mg/l - 48 h

Cobalt dichloride: Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae)- 0.52 mg/l - 96 h

**Persistence and degradability** Sodium cacodylate: Bioaccumulation Gambusia affinis (Mosquito fish) -32 d Bioconcentration factor (BCF): 21

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** Very toxic to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Additional information** no information available

## SECTION 13: Disposal considerations

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

## SECTION 14: Transport information

**IATA, IMDG, DOT (US)** not dangerous good during transportation

**UN number** none

**UN proper shipping name** none

**Transport hazard class** none

**Packing group** none

**Environmental hazards** none

**Special precaution for user** none

## SECTION 15: Regulatory information

### US Federal Regulations

US Toxic Substances Control Act (TSCA): Not listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards : No chemicals were found.

## **SECTION 16: Other information**

Reason for revision SDS sections updated

Version no. 1

For research use only. Not for use in diagnostic procedures.

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. UElandy (Suzhou) shall not be held liable for any damage resulting from handling or contact with the above product.

## **SAFETY DATA SHEET**

Date Revised: Sep 7, 2021

### **SECTION 1: Product and Company Identification**

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [YF@488 TUNEL Reaction Buffer]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

### **SECTION 2: Hazards identification**

**Classification according to Regulation (EC) No 1272/2008[CLP]**

Acute toxicity 4, Acute toxicity 2, Carcinogen 1A, Aquatic acute 1, Aquatic chronic 1

Acute Toxicity. 4, Skin Sensitizer. 1, Respiratory Sensitizer 1, Mutagenicity 2, Carcinogenicity 1B, Reproductive Toxicity 1B

**Classification according to Directive 1999/45/EC**

None

**Labeling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram**

GHS06 Skull and Crossbones, GHS08 Health Hazard, GHS09 Environment

**Signal word** Danger

**Hazard statements**

H301 Toxic if swallowed, H302 Harmful if swallowed, H317 May cause an allergic skin reaction, H330 Fatal if inhaled, H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled, H341 Suspected of causing genetic defects, H350 May cause cancer, H360 May damage fertility or the unborn child, H400 Very toxic to aquatic life, H410 Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P264 Wash skin thoroughly after handling, P270 Do not eat, drink or smoke when using this product, P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician, P330 Rinse mouth, P405 Store locked up, P501 Dispose of contents/container to hazardous chemical waste, P260 Do not breathe dust/fume/gas/mist/vapours/spray, P271 Use only in a well-ventilated area, P284 Wear respiratory protection, P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing, P310 Immediately call a POISON CENTER or doctor/physician, P403+P233 Store in a well-ventilated place and keep container tightly closed, P201 Obtain special instructions before use, P202 Do not handle until all safety precautions have been read and understood, P281 Use personal protective equipment as required, P308+P313 IF exposed or concerned: Get medical advice/attention, P272 Contaminated work clothing should not be allowed out of the workplace, P273 Avoid release to the environment, P280 Wear protective gloves/protective clothing/eye protection/face protection, P391 Collect spillage. Hazardous to the aquatic environment. P302+P352 IF ON SKIN: wash with plenty of soap and water, P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse, P285 In case of inadequate ventilation wear respiratory protection, P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing, P342 + P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician, P405 Store locked up.

**HMIS Classification**

Health hazard: 3

# US EVERBRIGHT

Flammability: 0

Physical hazards: 0

## NFPA Rating

Health hazard: 3

Fire: 0

Reactivity Hazard: 0

## SECTION 3: Composition/information on ingredients

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Sodium cacodylate (cacodylic acid, dimethylarsenic acid)	75-60-5	200-883-4	N/A	3%	Acute Tox. 4 * Acute Tox. 2 Carc. 1A Aquatic Acute 1 Aquatic Chronic 1	N/A
Cobalt(II) Chloride (cobalt dichloride)	7646-79-9	231-589-4	027-004-00-5	<0.1%	Acute Tox. 4 * Carc. 1B Skin Sens. 1 Resp. Sens. 1 Muta. 2 Carc. 1B Repr. 1B Aquatic Acute 1 Aquatic Chronic 1	Carc. 1B Acute Tox. 4 * Resp. Sens. 1 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1
dATP	1927-31-7	N/A	N/A	<0.01%	N/A	N/A
YF-dUTP	N/A	N/A	N/A	<0.001%	N/A	N/A

## 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

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Flush eyes with water as a precaution.

### If swallowed

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

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

### Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling and storage

### Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

### Conditions for safe storage

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

Store at -20°C.

## SECTION 8: Exposure controls/personal protection

### Components with workplace control parameters

Substance Cobalt dichloride

CAS no. 7646-79-9

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	-	-	-	-	-	-
Limit value, short term	-	-	-	-	-	-

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	-	-	-	-	0.02mg/m <sup>3</sup>	-	-
Limit value, short term	-	-	-	-	-	-	-

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	-	-	-	-	-	-	-
Limit value, short term	-	-	-	-	-	-	-

### Personal protective equipment

#### 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.

#### Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### 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

Chemical Name	YF@488 TUNEL Reaction Buffer
Appearance	Liquid
Odor	No data available
Odor threshold	No data available
pH	6.6
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Water soluble
Partition coefficient:n-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

## SECTION 10: Stability and reactivity

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Oxidizing agents, Alkali metals, Strong bases

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sodium oxides, Arsenic oxides Hydrogen chloride gas, Cobalt/cobalt oxides

Other decomposition products - no data available

## SECTION 11: Toxicological information

### Acute toxicity

**Oral LD50** Sodium cacodylate : rat - 644 mg/kg; cobalt dichloride: 418 mg/kg

**Inhalation LC50** None

# US EVERBRIGHT

**Dermal LD50** None

**Other information on 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** Sodium cacodylate, cobalt dichloride: Laboratory experiments have shown mutagenic effects.

## **Carcinogenicity**

Carcinogenicity - mouse – Oral (Dimethylarsinic acid)

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. (Dimethylarsinic acid)

IARC: 1 - Group 1: Carcinogenic to humans (Dimethylarsinic acid); IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

2B - Group 2B: Possibly carcinogenic to humans (Dimethylarsinic acid), 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride)

IARC: 1 - Group 1: Carcinogenic to humans (Dimethylarsinic acid)

2B - Group 2B: Possibly carcinogenic to humans (Dimethylarsinic acid)

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.

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**

Reproductive toxicity - mouse - Oral

Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. (Dimethylarsinic acid)

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct. Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females) (Cobalt dichloride).

May damage fertility.

## **Teratogenicity**

May cause congenital malformation in the fetus. (Dimethylarsinic acid)

## **Specific target organ toxicity - single exposure (Globally Harmonized System)**

Inhalation - May cause respiratory irritation. (Dimethylarsinic acid)

## **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

## **Aspiration hazard**

no data available

## **Potential health effects**

**Inhalation** Toxic if inhaled. Causes respiratory tract irritation. (Dimethylarsinic acid)

**Ingestion** Toxic if swallowed. (Dimethylarsinic acid)

**Skin** May be harmful if absorbed through skin. Causes skin irritation. (Dimethylarsinic acid)

**Eyes** Causes eye irritation. (Dimethylarsinic acid)

## **Aggravated**

# US EVERBRIGHT

## Medical Condition

Cacodylic acid may be partially reduced to inorganic arsenic in the body, Exposure to arsenic compounds can cause: burning, dry nose, dry mouth, Muscle cramps/spasms,

May cause irritation of the Gastrointestinal tract, Vomiting, Nausea, Diarrhea, Shock, Death.

## Signs and Symptoms of Exposure

Drowsiness, Tremors, Convulsions, dry mouth, metallic taste, loss of appetite, respiratory difficulties, garlic-like breath odor, garlic-like perspiration (Dimethylarsinic acid). Blood disorders, Cough, Shortness of breath, Headache, Nausea, Vomiting (Cobalt dichloride).

## Synergistic effects

no data available

## Additional Information

RTECS: CH7525000 (Dimethylarsinic acid)

RTECS: GF9800000 (Cobalt dichloride)

## SECTION 12: Ecological information

**Toxicity** Sodium cacodylate: Toxicity to fish LC50 - Lepomis macrochirus - > 180 mg/l - 96 h Cobalt dichloride: Toxicity to fish LC50 - Cyprinus carpio (Carp) - 0.33 mg/l - 96 h Cobalt dichloride: Toxicity to daphnia and other aquatic invertebrates mortality NOEC - Daphnia - < 0.05 mg/l - 7 d EC50 - Daphnia magna (Water flea) - 1.1 -1.6 mg/l - 48 h

Cobalt dichloride: Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae)- 0.52 mg/l - 96 h

**Persistence and degradability** Sodium cacodylate: Bioaccumulation Gambusia affinis (Mosquito fish) -32 d Bioconcentration factor (BCF): 21

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** Very toxic to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Additional information** no information available

## SECTION 13: Disposal considerations

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

## SECTION 14: Transport information

**IATA, IMDG, DOT (US)** not dangerous good during transportation

**UN number** none

**UN proper shipping name** none

**Transport hazard class** none

**Packing group** none

**Environmental hazards** none

**Special precaution for user** none

## SECTION 15: Regulatory information

### US Federal Regulations

US Toxic Substances Control Act (TSCA): Not listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards : No chemicals were found.

## **SECTION 16: Other information**

Reason for revision SDS sections updated

Version no. 1

For research use only. Not for use in diagnostic procedures.

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. UElandy (Suzhou) shall not be held liable for any damage resulting from handling or contact with the above product.

## SAFETY DATA SHEET

Date Revised: Sep 7, 2021

### SECTION 1: Product and Company Identification

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [TdT Enzyme]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

### SECTION 2: Hazards identification

**Classification according to Regulation (EC) No 1272/2008[CLP]**

None

**Classification according to Directive 1999/45/EC**

None

**Labeling according to Regulation (EC) No 1272/2008[CLP]**

**Hazard pictogram**

GHS07, GHS09, GHS05

**Signal word** Danger

**Hazard statements**

Hazard statements H302 Harmful if swallowed; H315 Causes skin irritation; H318 Causes serious eye damage; H411 Toxic to aquatic life with long lasting effects

**Precautionary statements**

P264 Wash hands thoroughly after handling, P270 Do not eat, drink or smoke when using this product, P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell, P330 Rinse mouth, P280 Wear protective gloves/protective clothing/eye protection/face protection, P302+P352 IF ON SKIN: wash with plenty of soap and water, P332+P313 IF SKIN irritation occurs: Get medical advice/attention, P362 Take off contaminated clothing and wash before reuse, 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 or doctor/physician, P273 Avoid release to the environment, P501 Dispose of contents/container to hazardous waste

**HMIS Classification (Triton X-100, glycerol)**

Health hazard: 2

Flammability: 1

Physical hazards: 0

**NFPA Rating**

Health hazard: 2

Fire: 1

Reactivity Hazard: 0

## SECTION 3: Composition/information on ingredients

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Potassium phosphate, monobasic	7778-77-0	231-913-4	N/A	<1%	N/A	Not classified
Potassium chloride	7447-40-7	231-211-8	N/A	<2%	N/A	Not classified
Triton X- 100	9002-93-1	N/A	N/A	<1%	N/A	Acute Tox. 4 Skin Irrit. 2
Glycerol	56-81-5	200-289-5	N/A	50%	N/A	Not classified
TdT Enzyme	N/A	N/A	N/A	<1%	N/A	Not classified

## 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

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Flush eyes with water as a precaution.

### If swallowed

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

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

### Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling and storage

### Precautions for safe handling

Avoid inhalation of vapor or mist.

Avoid direct contact with substance.

### Conditions for safe storage

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

Store at -20°C.

## SECTION 8: Exposure controls/personal protection

### Components with workplace control parameters

Substance Glycerol

CAS no. 56-81-5

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	-	10 mg/m <sup>3</sup>	-	-	10 mg/m <sup>3</sup>	50 mg/m <sup>3</sup> inhalable aerosol (DFG)
Limit value, short term	-	-	-	-	-	100 mg/m <sup>3</sup> inhalable aerosol (DFG)

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	-	-	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	-	-	10 mg/m <sup>3</sup>
Limit value, short term	-	-	-	-	-	-	-

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	10 mg/m <sup>3</sup>	IDLH: Immediately Dangerous to Life or Health	(Vacated) TWA: 10 mg/m <sup>3</sup> (Vacated) TWA: 5 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	Ontario TWA: 10 mg/m <sup>3</sup> Quebec TWA: 10 mg/m <sup>3</sup>	-	10 mg/m <sup>3</sup>
Limit value, short term	-	-	-	-	-	-	-

### Personal protective equipment

#### 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.

#### Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### 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

Chemical Name	TdT Enzyme
Appearance	Liquid
Odor	No data available
Odor threshold	No data available
pH	7.2
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Water soluble
Partition coefficient:n-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

## SECTION 10: Stability and reactivity

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks

### Materials to avoid

No data available

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

## SECTION 11: Toxicological information

### Acute toxicity

**Oral LD50** Glycerol-rat - 12,600 mg/kg

**Inhalation LC50** no data available

**Dermal LD50** Glycerol-rabbit - > 10,000 mg/kg

# US EVERBRIGHT

**Other information on acute toxicity** no data available

**Skin corrosion/irritation** Glycerol-rabbit - Mild skin irritation - 24 h

**Serious eye damage/eye irritation** Glycerol-rabbit - Mild eye irritation - 24 h

**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.

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 (Globally Harmonized System)**

no data available

## **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

## **Aspiration hazard**

no data available

## **Potential health effects**

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

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

## **Additional Information**

RTECS: TC6615500 (Potassium phosphate, monobasic), TS8050000 (Potassium chloride), MD0907700 (Triton X-100), MA8050000 (glycerol)

## **SECTION 12: Ecological information**

**Toxicity DMSO** no information available

**Persistence and degradability** no information available

**Biodegradation** no information available

**Mobility in soil** no information available

**Results of PBT and vPvB assessment** no information available

**Other adverse effects** no information available

**Additional information** no information available

## **SECTION 13: Disposal considerations**

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

## **SECTION 14: Transport information**

**IATA, IMDG, DOT (US)** not dangerous good during transportation

**UN number** none

# US EVERBRIGHT

UN proper shipping name    none

Transport hazard class    none

Packing group    none

Environmental hazards    none

Special precaution for user    none

## **SECTION 15: Regulatory information**

### **US Federal Regulations**

US Toxic Substances Control Act (TSCA): Not listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards : No chemicals were found.

## **SECTION 16: Other information**

Reason for revision    SDS sections updated

Version no.    1

For research use only. Not for use in diagnostic procedures.

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. UELandy (Suzhou) shall not be held liable for any damage resulting from handling or contact with the above product.

## SAFETY DATA SHEET

Date Revised: Sep 7, 2021

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [Proteinase K]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

### SECTION 2: Hazards identification

**GHS - Classification**

**Signal Word**

None

**Hazard pictograms**

None

**Health hazards**

Not Hazardous

**Physical hazards**

Not Hazardous

**Environmental hazards**

Not Hazardous

**Hazard Statements**

Not Applicable

**Precautionary Statements**

**Prevention**

Not Applicable

**Response**

Not Applicable

**Storage**

Not Applicable

**Disposal**

Not Applicable

**Other hazards**

Not Applicable

**HMIS**

Health	0
Flammability	0
Reactivity	0

# US EVERBRIGHT

## SECTION 3: Composition/information on ingredients

The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Rinse with plenty of water. Immediate medical attention is not required.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
<b>Ingestion</b>	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
<b>Inhalation</b>	Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
<b>Notes to Physician</b>	Treat symptomatically.
<b>Most important symptoms and effects, both acute and delayed</b>	Not Applicable
<b>Indication of any immediate medical attention and special treatment needed</b>	None.

## SECTION 5: Firefighting measures

<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	No information available.
<b>Special hazards arising from the substance or mixture</b>	Not known.
<b>Advice for fire-fighters</b>	Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Always wear recommended Personal Protective Equipment Use personal protection equipment  
See Section 8 for more detail

### Environmental precautions

No special environmental precautions required.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

# US EVERBRIGHT

## Specific end use(s)

For research use only.

## SECTION 8: Exposure controls/personal protection

### Control parameters

**Exposure Limits** Contains no substances with occupational exposure limit values.

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

### Exposure controls

### Personal Protective Equipment

**Respiratory protection** In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

**Hand protection** Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

**Eye protection** Tight sealing safety goggles.

**Skin and Body Protection** Wear suitable protective clothing.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	liquid	
<b>Odor</b>	No data available	
<b>pH</b>	6-8	
<b>Melting point / melting range</b>	°C Mixture has not been tested	☒ Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	☒ Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	☒ Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	☒ Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	☒ Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>		
No data available.		

## SECTION 10: Stability and reactivity

**Reactivity** None known.

# US EVERBRIGHT

<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has been reported
<b>Conditions to avoid</b>	No information available.
<b>Incompatible materials</b>	No dangerous reaction known under conditions of normal use.
<b>Hazardous decomposition products</b>	No data available.

## SECTION 11: Toxicological information

### Information on toxicological effects

There is no evidence available indicating acute toxicity.

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT – Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT – Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues.

This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Not classified as dangerous in the meaning of transport regulations

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

### Environmental hazards

Not Applicable

**Special precautions for user**

# US EVERBRIGHT

Not Applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not Applicable.

## **SECTION 15: Regulatory information**

### **US Federal Regulations**

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### **US State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **WHMIS Hazard Class**

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

## **SECTION 16: Other information**

Reason for revision SDS sections updated

Version no. 1

For research use only. Not for use in diagnostic procedures.

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. UELandy (Suzhou) shall not be held liable for any damage resulting from handling or contact with the above product.

## SAFETY DATA SHEET

Date Revised: Sep 7, 2021

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [DNase I (2 U/ $\mu$ L)]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

### SECTION 2: Hazards identification

**GHS - Classification**

**Signal Word**

None

**Hazard pictograms**

None

**Health hazards**

Not Hazardous

**Physical hazards**

Not Hazardous

**Environmental hazards**

Not Hazardous

**Hazard Statements**

Not Applicable

**Precautionary Statements**

**Prevention**

Not Applicable

**Response**

Not Applicable

**Storage**

Not Applicable

**Disposal**

Not Applicable

**Other hazards**

Not Applicable

**HMIS**

Health	0
Flammability	0
Reactivity	0

## SECTION 3: Composition/information on ingredients

Chemical Name	CAS No.	Common name	EINECS-No	Weight-%
Glycerol	56-81-5	Not applicable	200-289-5	40-70

We recommend handling all chemicals with caution.

## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Rinse with plenty of water. Immediate medical attention is not required.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
<b>Ingestion</b>	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
<b>Inhalation</b>	Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
<b>Notes to Physician</b>	Treat symptomatically.
<b>Most important symptoms and effects, both acute and delayed</b>	Not Applicable
<b>Indication of any immediate medical attention and special treatment needed</b>	None.

## SECTION 5: Firefighting measures

<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	No information available.
<b>Special hazards arising from the substance or mixture</b>	Not known.
<b>Advice for fire-fighters</b>	Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
 Always wear recommended Personal Protective Equipment Use personal protection equipment  
 See Section 8 for more detail

### Environmental precautions

No special environmental precautions required.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

### Conditions for safe storage, including any incompatibilities

# US EVERBRIGHT

Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

## Specific end use(s)

For research use only.

## SECTION 8: Exposure controls/personal protection

### Control parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

Chemical Name	Brazil - OEL - TWAs (LTs)	Brazil - OEL - Ceilings	Brazil - OEL - Skin Designations
Glycerol	None	None	None

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

### Exposure controls

### Personal Protective Equipment

#### Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

#### Hand protection

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

#### Eye protection

Tight sealing safety goggles.

#### Skin and Body Protection

Wear suitable protective clothing.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

#### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance	liquid	
Color	No data	
Odor	No data available	
Molecular Weight	No data	
Melting point / melting range	°C No data	ℱ No data
Boiling point / boiling range	°C No data	ℱ No data
Flash point	°C No data	ℱ No data
Autoignition Temperature	°C No data	ℱ No data
Decomposition temperature	°C No data	ℱ No data
Evaporation rate	No data available	
Viscosity	No data	
Flammability (solid, gas)	No data available	
Upper explosion limit	No data	
Lower explosion limit	No data	
Vapor Pressure	No data	
Vapor density	No data	
Relative density	No data	
Specific gravity	No data available	
Solubility	No data available	

# US EVERBRIGHT

**Partition coefficient:** No data available  
**n-octanol/water**  
**Explosive properties** No data  
**Oxidizing properties** No data  
**Particle characteristics** No data  
**Other information**  
 No data available.

## SECTION 10: Stability and reactivity

**Reactivity** None known.  
**Chemical stability** Stable under normal conditions.  
**Possibility of hazardous reactions** Hazardous reaction has been reported  
**Conditions to avoid** No information available.  
**Incompatible materials** No dangerous reaction known under conditions of normal use.  
**Hazardous decomposition products** No data available.

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Glycerol	= 12600 mg/kg (Rat)	> 10 g/kg(Rabbit)	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

### Principal Routes of Exposure

**Acute toxicity** Data are conclusive but insufficient for classification.  
**Skin corrosion/irritation** Data are conclusive but insufficient for classification.  
**Serious eye damage/irritation** Data are conclusive but insufficient for classification  
**Respiratory or skin sensitization** Data are conclusive but insufficient for classification  
**Specific target organ toxicity (STOT) – single exposure** Data are conclusive but insufficient for classification  
**Specific target organ toxicity (STOT) – repeated exposure** Data are conclusive but insufficient for classification  
**Carcinogenicity** Data are conclusive but insufficient for classification  
**Germ cell mutagenicity** Data are conclusive but insufficient for classification  
**Reproductive toxicity** Data are conclusive but insufficient for classification  
**Aspiration hazard** Data are conclusive but insufficient for classification

## SECTION 12: Ecological information

### Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Glycerol	No data available	No data available	No data available	No data available	logPow-1.76

# US EVERBRIGHT

**Mobility in soil** No information available.  
**Persistence and degradability** No information available.  
**Bioaccumulative potential** No information available.  
**Results of PBT and vPvB assessment**  
 This mixture does not contain any substances that are assessed to be a PBT or a vPvB.  
**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

**UN number** Not Applicable  
**UN proper shipping name** Not Applicable  
**Transport hazard class(es)** Not Applicable  
**Packing group** Not Applicable

### Marine pollutant

No

### Environmental hazards

Not Applicable

### Special precautions for user

Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### SARA 313

This product is not regulated by SARA.

#### Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

### US State Regulations

Chemical Name	Massachusetts - RTK (Right-to-Know)	New Jersey - RTK (Right-to-Know)	Pennsylvania - RTK (Right-to-Know)
Glycerol	Listed	Listed	Listed

### California Proposition 65

# US EVERBRIGHT

This product does not contain any Proposition 65 chemicals.

## WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

## National Regulations – Brazil

Chemical Name	CAS No.	Brazil - National Agency for Sanitary Surveillance (ANVISA)	Brazil - National List of Carcinogen Agents to Humans (LINACH)
Glycero	56-81-5	Not Listed	Not Listed

## SECTION 16: Other information

Reason for revision SDS sections updated

Version no. 1

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**SAFETY DATA SHEET**

Date Revised: Sep 7, 2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**Product Name:** YF@488 TUNEL Apoptosis Kit (Green fluorescence) [10 × DNase I Buffer]

**Catalog Number:** T6013S,T6013L

**Manufacturer/Supplier:**

UElandy (Suzhou) Co., Ltd.

Room 302-1, Building 1, No.18 Chunyao Road, Caohu Industrial Park, Xiangcheng District, Suzhou, P.R. China

Phone: 86-512-69571710, mailbox:service@uelandy.com

Web: <http://www.uelandy.com>

**SECTION 2: Hazards identification**

**GHS - Classification**

**Signal Word**

None

**Hazard pictograms**

None

**Health hazards**

Not Hazardous

**Physical hazards**

Not Hazardous

**Environmental hazards**

Not Hazardous

**Hazard Statements**

Not Applicable

**Precautionary Statements**

**Prevention**

Not Applicable

**Response**

Not Applicable

**Storage**

Not Applicable

**Disposal**

Not Applicable

**Other hazards**

Not Applicable

**HMIS**

Health	0
Flammability	0
Reactivity	0

# US EVERBRIGHT

## SECTION 3: Composition/information on ingredients

The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Rinse with plenty of water. Immediate medical attention is not required.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Ingestion</b>	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
<b>Inhalation</b>	Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
<b>Notes to Physician</b>	Treat symptomatically.
<b>Most important symptoms and effects, both acute and delayed</b>	Not Applicable
<b>Indication of any immediate medical attention and special treatment needed</b>	None.

## SECTION 5: Firefighting measures

<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	No information available.
<b>Special hazards arising from the substance or mixture</b>	Not known.
<b>Advice for fire-fighters</b>	Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>
Ensure adequate ventilation
Always wear recommended Personal Protective Equipment Use personal protection equipment
See Section 8 for more detail
<b>Environmental precautions</b>
No special environmental precautions required.
<b>Methods and material for containment and cleaning up</b>
Soak up with inert absorbent material.
<b>Reference to other sections</b>
See section 8 for more information.

## SECTION 7: Handling and storage

<b>Precautions for safe handling</b>
Use personal protective equipment as required. No special handling advices are necessary.
<b>Conditions for safe storage, including any incompatibilities</b>
Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

# US EVERBRIGHT

## Specific end use(s)

For research use only.

## SECTION 8: Exposure controls/personal protection

### Control parameters

**Exposure Limits** Contains no substances with occupational exposure limit values.

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

### Exposure controls

### Personal Protective Equipment

**Respiratory protection** In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

**Hand protection** Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

**Eye protection** Tight sealing safety goggles.

**Skin and Body Protection** Wear suitable protective clothing.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	liquid	
<b>Color</b>	No data	
<b>Odor</b>	No data available	
<b>Molecular Weight</b>	No data	
<b>Melting point / melting range</b>	°C No data	⚠ No data
<b>Boiling point / boiling range</b>	°C No data	⚠ No data
<b>Flash point</b>	°C No data	⚠ No data
<b>Autoignition Temperature</b>	°C No data	⚠ No data
<b>Decomposition temperature</b>	°C No data	⚠ No data
<b>Evaporation rate</b>	No data available	
<b>Viscosity</b>	No data	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	No data	
<b>Lower explosion limit</b>	No data	
<b>Vapor Pressure</b>	No data	
<b>Vapor density</b>	No data	
<b>Relative density</b>	No data	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	No data	
<b>Oxidizing properties</b>	No data	
<b>Particle characteristics</b>	No data	

# US EVERBRIGHT

## Other information

No data available.

## SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has been reported
Conditions to avoid	No information available.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	No data available.

## SECTION 11: Toxicological information

### Information on toxicological effects

There is no evidence available indicating acute toxicity.

### Principal Routes of Exposure

Acute toxicity	Data are conclusive but insufficient for classification.
Skin corrosion/irritation	Data are conclusive but insufficient for classification.
Serious eye damage/irritation	Data are conclusive but insufficient for classification
Respiratory or skin sensitization	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – single exposure	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – repeated exposure	Data are conclusive but insufficient for classification
Carcinogenicity	Data are conclusive but insufficient for classification
Germ cell mutagenicity	Data are conclusive but insufficient for classification
Reproductive toxicity	Data are conclusive but insufficient for classification
Aspiration hazard	Data are conclusive but insufficient for classification

## SECTION 12: Ecological information

### Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Mobility in soil** No information available.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues.

This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations

## SECTION 14: Transport information

# US EVERBRIGHT

## **IATA / ADR / DOT-US / IMDG**

Not regulated in the meaning of transport regulations

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

## **Marine pollutant**

No

## **Environmental hazards**

Not Applicable

## **Special precautions for user**

Not Applicable

## **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not Applicable.

## **SECTION 15: Regulatory information**

### **US Federal Regulations**

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contains HAPs.

### **US State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **WHMIS Hazard Class**

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

### **National Regulations – Brazil**

Not regulated

## **SECTION 16: Other information**

Reason for revision SDS sections updated

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