



## SAFETY DATA SHEET

Cat. No. CTG-CTG-AP0004, Annexin V- iFluor® 488 Apoptosis Detection Kit ISSUE DATE MAY 3, 2019

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Annexin V- iFluor® 488 Apoptosis Detection Kit  
PRODUCT CODES: Cat. No. CTG-AP0004  
MANUFACTURER: Celltechgen LLC  
ADDRESS: 14780 Memorial Drive, Suite 210, Houston, TX 77079, United States  
EMERGENCY PHONE: 1-877-994-4100  
CHEMTREC PHONE:  
OTHER CALLS: 281-531-7940  
Email: info@celltechgen.com

### SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Annexin V- iFluor® 488	Solution (contains BSA)	0.5 ml	See below
Propidium Iodide Solution	In DMSO	2 ml	See below
Binding Buffer	Proprietary Buffer	20 ml	No hazards

#### Bovine serum albumin (BSA):

Emergency Overview: Originates from USA where BSE has not been reported

OSHA Hazards: No known OSHA hazards

GHS Classification: Not a dangerous substance according to GHS

GHS Label elements, including precautionary statements

Pictogram: none

Signal word: none

Hazard statement(s): none

Precautionary statement(s): none

HMIS Classification

Health hazard: 0

Flammability: 0

Physical hazards: 0

NFPA Rating

Health Hazard: 0

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

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

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

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

DMSO:

Emergency Overview

OSHA Hazards: Combustible liquid, Target organ effect

Target Organs: Eyes, Skin

GHS Classification: Flammable liquids (Category 4)



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GHS Label elements, including precautionary statements

Pictogram: none

Signal word: Warning

Hazard statement(s): H227 Combustible liquid

Precautionary statement(s): none

HMIS Classification

Health hazard: 0

Chronic Health Hazard: \*

Flammability: 2

Physical hazards: 0

NFPA Rating

Health hazard: 0

Fire: 2

Reactivity Hazard: 0

Potential Health Effects

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

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

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Bovine Serum Albumin (BSA)	9048-46-8	232-936-2	--	--
DMSO	67-68-5	200-664-3	78.13	C2H6OS

## 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: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

## SECTION 5: FIRE-FIGHTING MEASURES

DMSO:

Suitable extinguishing media: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding)



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of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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

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

Further information: Use water spray to cool unopened containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

## SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage

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

Recommended storage temperature: +4 °C

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### BSA & DMSO:

Contains no substances with occupational exposure limit values.

Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Eye protection

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

### Skin and body protection

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

### Hygiene measures



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Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	BSA	DMSO
Appearance:	Lyophilized powder	Clear liquid
pH:	4.8-7.5	No data available
Water Solubility:	Slightly soluble	Completely miscible
Other Solubility:	No data available	No data available
Boiling Point (°C):	No data available	189 oC (372 oF)
Melting Point (°C):	No data available	16-19 oC (61-66 oF)
Flash Point (°C):	No data available	87 oC (189 oF)
Ignition Temperature (°C):	No data available	301 oC (574 oF)
Density:	No data available	1.1 g/ml

## SECTION 10: STABILITY AND REACTIVITY

Property	BSA	DMSO
Chemical stability:	Stable under recommended storage conditions	
Conditions to avoid:	No data available	Heat, flames, sparks
Materials to avoid:	Strong oxidizing agents	Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents
Hazardous decomposition products:	No data available	Carbon oxides, sulfur oxides

## SECTION 11: TOXICOLOGICAL INFORMATION

DMSO:

Acute toxicity: LD50 Oral – rat – 14,500 mg/kg

LC50 Inhalation – rat – 4 h – 40250 ppm

LD50 Dermal – rabbit – >5,000 mg/kg

Skin corrosion/irritation: Skin – rabbit – no skin irritation – 4h

Serious eye damage/eye irritation: Eyes – rabbit – mild eye irritation

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: Genotoxicity in vitro – mouse – lymphocyte: Cytogenetic analysis

Genotoxicity in vitro – mouse – lymphocyte: Mutation in mammalian somatic cells

Genotoxicity in vivo – rat – Intraperitoneal: Cytogenetic analysis

Genotoxicity in vivo – mouse – Intraperitoneal: DNA damage

Carcinogenicity: Carcinogenicity – rat – Oral Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Skin and appendages: other:

tumors.

Carcinogenicity – mouse – Oral Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Leukemia skin and appendages: other:

tumors.

IARC:

ACGIH:

NTP:



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## OSHA:

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.

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.

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.

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 – rat – Intraperitoneal Effects on fertility: abortion

Reproductive toxicity – rat – Intraperitoneal Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)

Reproductive toxicity – rat – Subcutaneous Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). Effects on fertility: litter size (e.g. # fetuses per litter; measured before birth)

Reproductive toxicity – mouse – Oral Effects on fertility: post-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea). Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific developmental abnormalities: musculoskeletal system.

Teratogenicity: Developmental toxicity – mouse – Intraperitoneal: Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus).

Specific developmental abnormalities: musculoskeletal system

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

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

Aspiration hazard: no data available

## Potential Health Effects

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

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

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

Signs and Symptoms of Exposure: Effects due to ingestion may include: nausea, fatigue, and/or headache.

Additional information: RTECS: PV6210000

## **SECTION 12: ECOLOGICAL INFORMATION**

### DMSO:

Elimination information (persistence and degradability): no data available

Ecotoxicity effects: Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h

LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia pulex (Water flea) - 27,500 mg/l

Toxicity to algae: EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h

Further information on ecology: no data available

## **SECTION 13: DISPOSAL CONSIDERATIONS**



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Product: Offer sur and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solven and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packaging: Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

### BSA:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### DMSO:

DOT (US): UN-Number: 1993, Class: CBL, Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide); Marine

pollutant: No; Poison Inhalation Hazard: No

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

## SECTION 15: REGULATORY INFORMATION

OSHA Hazards: DMSO: Combustibile liquid, Target organ effect

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

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

SARA 311/312 Hazards: DMSO: Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: Serum albumin, CAS-No. 9048-46-8

Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01

New Jersey Right To Know Components: Serum albumin, CAS-No. 9048-46-8

Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01

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

EU regulations

Component	Risk Phrases	Safety Phrases
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BSA	--	--
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DMSO	R10, R36/37/38 S24/25, S36/37/39, S45	
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## SECTION 16: OTHER INFORMATION

### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.