



Material Safety Data Sheet (MSDS)  
Revision Date: 09-27-2023

**Kit Name: VitroView™ Anti Immunofluorescence Triple Staining Kit, FL488 Anti-Mouse (Green), FL594 Anti-Rabbit (Red)& FL647 Anti-Rat (far Red) (For 50-100 slides)**

**Catalog#: VB-6300**

**Components:**

	RTU Normal Goat Serum
	FL488 Conjugated Goat anti Mouse (1mg/ml)
	FL594 Conjugated Goat anti Rabbit (1mg/ml)
	FL647 Conjugated Goat anti Rat (1mg/ml)
	Aqueous Anti-fade Mounting Medium with DAPI

## RTU Normal Goat Serum MSDS

### 1. Identification of the Substance/Mixture and Company

<b>Product Name</b>	RTU normal goat serum
<b>Catalog#</b>	
<b>Product Description</b>	Component
<b>Manufacturer/Supplier</b>	VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850
<b>Tel/fax Number</b>	Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

### 2. Hazards Identification

#### GHS Classification

<b>Signal Word</b>	None
<b>Hazard pictograms</b>	None
<b>Health hazards</b>	Not Hazardous
<b>Environmental hazards</b>	Not Hazardous
<b>Hazard Statements</b>	Not Applicable

#### Precautionary Statements

<b>Prevention</b>	Not Applicable
<b>Response</b>	Not Applicable
<b>Storage</b>	Not Applicable
<b>Disposal</b>	Not Applicable
<b>Other hazards</b>	Not Applicable

### 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.

### 4. First Aid Measures

#### Description of first aid measures

<b>Skin contact</b>	Rinse skin with 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.

#### **Most important symptoms and effects, both acute and delayed**

Not Applicable

#### **Indication of any immediate medical attention and special treatment needed**

None.

### 5. Firefighting Measures

#### Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Unsuitable extinguishing media	No information available.

#### **Special hazards arising from the substance or mixture**

Not known

#### **Protective equipment and precautions for firefighters**

Standard procedure for chemical fires.

## 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 information

### 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.

## 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.

### Specific end use(s)

For Laboratory Use

## 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 require

## 9. Physical and Chemical Properties

Physical State	Liquid
Appearance	Colorless
Odor	Odorless
Odor Threshold	No information available
pH	6-8
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits Upper	No data available

<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Specific Gravity</b>	No information available
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No information available

## 10 Stability and Reactivity

<b>Reactivity</b>	None known.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has not 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

## 11. Toxicological Information

### Information on toxicological effects

There is no evidence available indicating acute toxicity.

### **Principal Routes of Exposure**

<b>Acute toxicity</b>	Data are conclusive but insufficient for classification.
<b>Skin corrosion/irritation</b>	Data are conclusive but insufficient for classification
<b>Serious eye damage/irritation</b>	Data are conclusive but insufficient for classification
<b>Respiratory or skin sensitization</b>	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

<b>Carcinogenicity</b>	Data are conclusive but insufficient for classification
<b>Germ cell mutagenicity</b>	Data are conclusive but insufficient for classification
<b>Reproductive toxicity</b>	Data are conclusive but insufficient for classification
<b>Aspiration hazard</b>	Data are conclusive but insufficient for classification

## 12. Ecological Information

### **Ecotoxicity**

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

<b>Mobility in soil</b>	No information available.
<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulative potential</b>	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

## 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

#### 14. Transport Information

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

Not regulated in the meaning of transport regulations

<b>UN number</b>	Not Applicable
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable
<b>Packing group</b>	Not Applicable
<b>Environmental hazards</b>	Not Applicable
<b>Special precautions for user</b>	Not Applicable

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

Not Applicable.

#### 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 contain 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

#### 16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

**ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

**IMDG:** International Maritime Code for Dangerous Goods

**DOT:** US Department of Transportation

**IATA:** International Air Transport Association

**ACGIH:** American Conference of Governmental Industrial Hygienists

**NFPA:** National Fire Protection Association (USA)

**HMIS:** Hazardous Materials Identification System (USA)

**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

## FL488 Conjugated Goat anti Mouse (1mg/ml) MSDS

### 1. Identification of the Substance/Mixture and Company

<b>Product Name</b>	FL488 Conjugated Goat anti Mouse (1mg/ml)
<b>Catalog#</b>	
<b>Product Description</b>	Component
<b>Manufacturer/Supplier</b>	VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850
<b>Tel/fax Number</b>	Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

### 2. Hazards Identification

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

### 3. Composition/information on ingredients

**Mixtures Description:** Mixture of the substances listed below.

**Composition:**

Component	CAS#
FL488	1374019-99-4
Goat anti Mouse	

### 4. First Aid Measures

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

**FIRST AID:** CALL A PHYSICIAN.

**SKIN:** Remove contaminated clothing. Wash exposed area with soap and water.

**EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

**INGESTION:** If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

### 5. Firefighting Measures

<b>Fire Extinguisher Type:</b>	Carbon Dioxide, dry chemical powder or appropriate foam
<b>Fire / Explosion Hazards:</b>	vapors heavier than air and will stay at the floor level
<b>Fire Fighting Procedure:</b>	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

### 6. Accidental Release Measures

Evacuate area. Wear self-contained breathing apparatus and protective clothing.  
Eliminate all sources of ignition.

### 7. Handling and Storage

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

### 8. Exposure Controls/Personal Protection

<b>Respiratory Protection:</b>	NIOSH/MSHA-approved respirator
<b>Ventilation:</b>	Mechanical
<b>Protective Gloves:</b>	Solvent resistant gloves as neoprene or nitrile
<b>Eye Protection:</b>	Splash Goggles
<b>Other Protective Equipment:</b>	Wear appropriate clothing to prevent skin exposure

## 9. Physical and Chemical Properties

### General Information

<b>Appearance</b>	
<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	characteristic organic odor
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined
<b>Boiling point/Boiling range:</b>	Undetermined
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower</b>	Not determined
<b>Upper</b>	Not determined
<b>Vapor pressure at 20°C (68 °F)</b>	Not determined.
<b>Density at 20°C (68 °F):</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Infinite.
<b>Segregation coefficient (n-octanol/water)</b>	Not determined
<b>Dynamic:</b>	Not determined
<b>Kinematic:</b>	Not determined
<b>Other information</b>	No further relevant information available.

## 10 Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid</b>	Avoid contact with heat, sparks, flames, or other sources of ignition.
<b>Materials to Avoid:</b>	Oxidizing materials
<b>Hazardous Decomposition Products:</b>	TOXIC gases produced at decomposition
<b>Hazardous polymerization:</b>	Will Not Occur
<b>Conditions to Avoid:</b>	None known

## 11. Toxicological Information

Oral, Rat: (Chloroform) 695 mg/kg, behavioral and respiratory effects noted; LD50, Dermal, Rabbit: >20,000 mg/kg, details of toxic effects not reported other than lethal dose value . Investigated as a tumorigen (Chloroform).  
LD50, Oral, Rat (Acetic Acid): 3310 mg/kg; LD50, Dermal, Rabbit (Acetic Acid): 1.06 L/kg, details of toxic effects not reported other than lethal dose value.

## 12. Ecological Information

Ethanol has moderate chronic toxicity to aquatic life. Chloroform has moderate acute and chronic toxicity to aquatic life. Chloroform has caused damage to various plants, including brittle roots and chromosomal damage. Insufficient data are available to evaluate the short term and long term effects of Chloroform to plants, birds, or land animals. Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aqueous systems, low potential to affect aquatic organisms and a low potential to affect the growth of some plant seedlings . Chemical Fate Information: This material is not expected to significantly bioaccumulate. Ethanol is slightly persistent in water, with a

half-life of between 2 to 20 days. Chloroform is non-persistent in the aquatic environment. Acetic Acid has low potential to bioconcentrate.

### 13. Disposal Considerations

Absorb with suitable inert material (vermiculite, dry sand, earth) and place in a chemical waste container for proper disposal in an approved waste disposal facility for incineration in a chemical incinerator equipped with scrubber and afterburner. Do not flush to the sewer. Ventilate area of spill. Have extinguishing agent available in case of fire. Eliminate all sources of ignition. Use non-sparking tools and equipment. Always dispose of in accordance with local, state and federal regulations.

### 14. Transport Information

Part Numbers: R1851000-1C, R1851000-4C, R1851000-500C D.O.T. Hazard Class: 3 (6.1) U.N. / N.A. Number: UN1992 Packing Group: III D.O.T. Shipping Name: Flammable Liquid, Toxic, n.o.s., (Ethanol and Chloroform) D.O.T. Label: 3, III

### 15. Regulatory Information

**OSHA Status:** These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA Status:** All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

**Sara Title III:**

**Section 302** Extremely Hazardous Substances: Not Applicable.

**Section 311/312** Hazardous Categories: Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

**Section 313** Toxic Chemicals: Not Applicable.

**California:** Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer. Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer.

**Pennsylvania:** Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List. Ethyl Alcohol (Ethanol) is listed as a Basic Hazard on the state's Hazardous Substances List. Acetic Acid is listed as an Environmental Hazard on the state's Hazardous Substances List. Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List.

**CERCLA Reportable Quantity:** Chloroform (Trichloromethane) - 10 pounds. Acetic Acid - 5,000 pounds. Acetic

**D022,U044,U154,D002,U154,D002,D022,U044 WHMIS:** B-2: Flammable and Combustible Material. Flammable Liquid. D-2A: Poisonous and Infectious Material.

**Materials causing other toxic effects** - Very Toxic Material. D-1B Poisonous and Infectious Material. Materials causing immediate and serious toxic effects - Toxic Material.

### 16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

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**HMIS:** Hazardous Materials Identification System (USA)

**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent



## FL594 Conjugated Goat anti Rabbit (1mg/ml) MSDS

### 1. Identification of the Substance/Mixture and Company

**Product Name** FL594 Conjugated Goat anti Rabbit (1mg/ml)  
**Catalog#**  
**Product Description** Component  
**Manufacturer/Supplier** VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850  
**Tel/fax Number** Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

### 2. Hazards Identification

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

### 3. Composition/information on ingredients

**Mixtures Description:** Mixture of the substances listed below.

**Composition:**

Component	CAS#
FL594	1638544-48-5
Goat anti Rabbit	

### 4. First Aid Measures

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

**FIRST AID:** CALL A PHYSICIAN.

**SKIN:** Remove contaminated clothing. Wash exposed area with soap and water.

**EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

**INGESTION:** If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

### 5. Firefighting Measures

**Fire Extinguisher Type:** Carbon Dioxide, dry chemical powder or appropriate foam  
**Fire / Explosion Hazards:** vapors heavier than air and will stay at the floor level  
**Fire Fighting Procedure:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

### 6. Accidental Release Measures

Evacuate area. Wear self-contained breathing apparatus and protective clothing.  
Eliminate all sources of ignition.

### 7. Handling and Storage

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

### 8. Exposure Controls/Personal Protection

**Respiratory Protection:** NIOSH/MSHA-approved respirator  
**Ventilation:** Mechanical  
**Protective Gloves:** Solvent resistant gloves as neoprene or nitrile  
**Eye Protection:** Splash Goggles  
**Other Protective Equipment:** Wear appropriate clothing to prevent skin exposure

## 9. Physical and Chemical Properties

### General Information

<b>Appearance</b>	
<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	characteristic organic odor
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined
<b>Boiling point/Boiling range:</b>	Undetermined
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower</b>	Not determined
<b>Upper</b>	Not determined
<b>Vapor pressure at 20°C (68 °F)</b>	Not determined.
<b>Density at 20°C (68 °F):</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Infinite.
<b>Segregation coefficient (n-octanol/water)</b>	Not determined
<b>Dynamic:</b>	Not determined
<b>Kinematic:</b>	Not determined
<b>Other information</b>	No further relevant information available.

## 10 Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid</b>	Avoid contact with heat, sparks, flames, or other sources of ignition.
<b>Materials to Avoid:</b>	Oxidizing materials
<b>Hazardous Decomposition Products:</b>	TOXIC gases produced at decomposition
<b>Hazardous polymerization:</b>	Will Not Occur
<b>Conditions to Avoid:</b>	None known

## 11. Toxicological Information

Oral, Rat: (Chloroform) 695 mg/kg, behavioral and respiratory effects noted; LD50, Dermal, Rabbit: >20,000 mg/kg, details of toxic effects not reported other than lethal dose value . Investigated as a tumorigen (Chloroform).  
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half-life of between 2 to 20 days. Chloroform is non-persistent in the aquatic environment. Acetic Acid has low potential to bioconcentrate.

### 13. Disposal Considerations

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Part Numbers: R1851000-1C, R1851000-4C, R1851000-500C D.O.T. Hazard Class: 3 (6.1) U.N. / N.A. Number: UN1992 Packing Group: III D.O.T. Shipping Name: Flammable Liquid, Toxic, n.o.s., (Ethanol and Chloroform) D.O.T. Label: 3, III

### 15. Regulatory Information

**OSHA Status:** These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA Status:** All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

**Sara Title III:**

**Section 302** Extremely Hazardous Substances: Not Applicable.

**Section 311/312** Hazardous Categories: Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

**Section 313** Toxic Chemicals: Not Applicable.

**California:** Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer. Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer.

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**CERCLA Reportable Quantity:** Chloroform (Trichloromethane) - 10 pounds. Acetic Acid - 5,000 pounds. Acetic

**D022,U044,U154,D002,U154,D002,D022,U044 WHMIS:** B-2: Flammable and Combustible Material. Flammable Liquid. D-2A: Poisonous and Infectious Material.

**Materials causing other toxic effects** - Very Toxic Material. D-1B Poisonous and Infectious Material. Materials causing immediate and serious toxic effects - Toxic Material.

### 16. Other Information

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**NFPA:** National Fire Protection Association (USA)

**HMIS:** Hazardous Materials Identification System (USA)

**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

**FL647 Conjugated Goat anti Rat (1mg/ml MSDS)**

**1. Identification of the Substance/Mixture and Company**

**Product Name** FL647 Conjugated Goat anti Rat (1mg/ml)  
**Catalog#**  
**Product Description** Component  
**Manufacturer/Supplier** VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850  
**Tel/fax Number** Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

**2. Hazards Identification**

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

**3. Composition/information on ingredients**

**Mixtures Description:** Mixture of the substances listed below.

**Composition:**

Component	CAS#
FL647	407627-60-5
Goat anti Rat	

**4. First Aid Measures**

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

**FIRST AID:** CALL A PHYSICIAN.

**SKIN:** Remove contaminated clothing. Wash exposed area with soap and water.

**EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

**INGESTION:** If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

**5. Firefighting Measures**

**Fire Extinguisher Type:** Carbon Dioxide, dry chemical powder or appropriate foam  
**Fire / Explosion Hazards:** vapors heavier than air and will stay at the floor level  
**Fire Fighting Procedure:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

**6. Accidental Release Measures**

Evacuate area. Wear self-contained breathing apparatus and protective clothing.  
Eliminate all sources of ignition.

**7. Handling and Storage**

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

**8. Exposure Controls/Personal Protection**

**Respiratory Protection:** NIOSH/MSHA-approved respirator  
**Ventilation:** Mechanical  
**Protective Gloves:** Solvent resistant gloves as neoprene or nitrile  
**Eye Protection:** Splash Goggles  
**Other Protective Equipment:** Wear appropriate clothing to prevent skin exposure

## 9. Physical and Chemical Properties

### General Information

<b>Appearance</b>	
<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	characteristic organic odor
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined
<b>Boiling point/Boiling range:</b>	Undetermined
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower</b>	Not determined
<b>Upper</b>	Not determined
<b>Vapor pressure at 20°C (68 °F)</b>	Not determined.
<b>Density at 20°C (68 °F):</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Infinite.
<b>Segregation coefficient (n-octanol/water)</b>	Not determined
<b>Dynamic:</b>	Not determined
<b>Kinematic:</b>	Not determined
<b>Other information</b>	No further relevant information available.

## 10 Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid</b>	Avoid contact with heat, sparks, flames, or other sources of ignition.
<b>Materials to Avoid:</b>	Oxidizing materials
<b>Hazardous Decomposition Products:</b>	TOXIC gases produced at decomposition
<b>Hazardous polymerization:</b>	Will Not Occur
<b>Conditions to Avoid:</b>	None known

## 11. Toxicological Information

Oral, Rat: (Chloroform) 695 mg/kg, behavioral and respiratory effects noted; LD50, Dermal, Rabbit: >20,000 mg/kg, details of toxic effects not reported other than lethal dose value . Investigated as a tumorigen (Chloroform).  
LD50, Oral, Rat (Acetic Acid): 3310 mg/kg; LD50, Dermal, Rabbit (Acetic Acid): 1.06 L/kg, details of toxic effects not reported other than lethal dose value.

## 12. Ecological Information

Ethanol has moderate chronic toxicity to aquatic life. Chloroform has moderate acute and chronic toxicity to aquatic life. Chloroform has caused damage to various plants, including brittle roots and chromosomal damage. Insufficient data are available to evaluate the short term and long term effects of Chloroform to plants, birds, or land animals. Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aqueous systems, low potential to affect aquatic organisms and a low potential to affect the growth of some plant seedlings . Chemical Fate Information: This material is not expected to significantly bioaccumulate. Ethanol is slightly persistent in water, with a

half-life of between 2 to 20 days. Chloroform is non-persistent in the aquatic environment. Acetic Acid has low potential to bioconcentrate.

### 13. Disposal Considerations

Absorb with suitable inert material (vermiculite, dry sand, earth) and place in a chemical waste container for proper disposal in an approved waste disposal facility for incineration in a chemical incinerator equipped with scrubber and afterburner. Do not flush to the sewer. Ventilate area of spill. Have extinguishing agent available in case of fire. Eliminate all sources of ignition. Use non-sparking tools and equipment. Always dispose of in accordance with local, state and federal regulations.

### 14. Transport Information

Part Numbers: R1851000-1C, R1851000-4C, R1851000-500C D.O.T. Hazard Class: 3 (6.1) U.N. / N.A. Number: UN1992 Packing Group: III D.O.T. Shipping Name: Flammable Liquid, Toxic, n.o.s., (Ethanol and Chloroform) D.O.T. Label: 3, III

### 15. Regulatory Information

**OSHA Status:** These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA Status:** All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

**Sara Title III:**

**Section 302** Extremely Hazardous Substances: Not Applicable.

**Section 311/312** Hazardous Categories: Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

**Section 313** Toxic Chemicals: Not Applicable.

**California:** Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer. Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer.

**Pennsylvania:** Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List. Ethyl Alcohol (Ethanol) is listed as a Basic Hazard on the state's Hazardous Substances List. Acetic Acid is listed as an Environmental Hazard on the state's Hazardous Substances List. Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List.

**CERCLA Reportable Quantity:** Chloroform (Trichloromethane) - 10 pounds. Acetic Acid - 5,000 pounds. Acetic

**D022,U044,U154,D002,U154,D002,D022,U044 WHMIS:** B-2: Flammable and Combustible Material. Flammable Liquid. D-2A: Poisonous and Infectious Material.

**Materials causing other toxic effects** - Very Toxic Material. D-1B Poisonous and Infectious Material. Materials causing immediate and serious toxic effects - Toxic Material.

### 16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

**ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

**IMDG:** International Maritime Code for Dangerous Goods

**DOT:** US Department of Transportation

**IATA:** International Air Transport Association

**ACGIH:** American Conference of Governmental Industrial Hygienists

**NFPA:** National Fire Protection Association (USA)

**HMIS:** Hazardous Materials Identification System (USA)

**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

## Aqueous Anti-fade Mounting Medium with DAPI

### 1. Identification of the Substance/Mixture and Company

<b>Product Name</b>	Aqueous Anti-fade Mounting Medium with DAPI
<b>Catalog#</b>	
<b>Product Description</b>	Component
<b>Manufacturer/Supplier</b>	VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850
<b>Tel/fax Number</b>	Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

### 2. Hazards Identification

#### Classification of the substance or mixture

<b>Classification</b>	
<b>Physical hazards</b>	Not Classified
<b>Health hazards</b>	Not Classified
<b>Environmental hazards</b>	Not Classified

#### Label elements

<b>EC number</b>	249-186-7
<b>Hazard statements</b>	NC Not Classified
<b>Precautionary statements</b>	EUH210 Safety data sheet available on request.

#### Other hazards

No information available.

### 3. Composition/information on ingredients

**Mixtures Description:** Mixture of the substances listed below.

#### **Composition:**

<b>Component</b>	<b>CAS#</b>
DAPI	28718-90-3

### 4. First Aid Measures

#### Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air at once. Keep affected person warm and at rest. Get medical attention immediately.
<b>Ingestion</b>	Not relevant.
<b>Skin contact</b>	Rinse immediately with plenty of water. Remove contaminated clothing. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

#### Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	May cause coughing or mild irritation.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Prolonged skin contact may cause redness and irritation.
<b>Eye contact</b>	May cause temporary eye irritation.

#### Indication of any immediate medical attention and special treatment needed

**Notes for the doctor** No specific recommendations.

### 5. Firefighting Measures

### **Extinguishing media**

**Suitable extinguishing media** Water spray, foam, dry powder or carbon dioxide.

### **Special hazards arising from the substance or mixture**

**Specific hazards** Vapours/gases/fumes of: Hydrogen chloride (HCl). Oxides of the following substances: Carbon. Nitrogen.

### **Advice for firefighters**

#### **Special protective equipment for firefighters**

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## **6. Accidental Release Measures**

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust. Avoid contact with skin and eyes.

### **Environmental precautions**

**Environmental precautions** Avoid the spillage or runoff entering drains, sewers or watercourses.

### **Methods and material for containment and cleaning up**

**Methods for cleaning up** Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor.

### **Reference to other sections**

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet.

## **7. Handling and Storage**

### **Precautions for safe handling**

**Usage precautions** Do not handle broken packages without protective equipment.

### **Conditions for safe storage, including any incompatibilities**

**Storage precautions** Keep only in the original container. Store at specified temperature. Refer to product label.

**Storage class** Refer to product datasheet.

### **Specific end use(s)**

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## **8. Exposure Controls/Personal Protection**

### **Control parameters**

### **Exposure controls**

#### **Protective equipment**

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.



<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.
<b>Hygiene measures</b>	Provide eyewash station. Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. Wash promptly with soap and water if skin becomes contaminated.
<b>Respiratory protection</b>	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Yellow.
<b>Odour</b>	No characteristic odour.
<b>Odour threshold</b>	No information available.
<b>pH</b>	pH (concentrated solution): 4.0 - 5.0 @ 10g/l
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	<100@ °C @ 760 mm Hg
<b>Flash point</b>	No information available.
<b>Evaporation rate</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	Not determined.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	No unusual fire or explosion hazards noted.
<b>Oxidising properties</b>	Not determined.

**Other information** Other information None.

## 10 Stability and Reactivity

### Reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

### Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** Not determined.

### Conditions to avoid

**Conditions to avoid** Avoid exposure to high temperatures or direct sunlight.

**Incompatible materials** **Materials to avoid** Strong oxidising agents.

### Hazardous decomposition products

Hazardous decomposition products Not known.

## 11. Toxicological Information

### Information on toxicological effects

<b>Toxicological effects</b>	No information available.
<b>Skin corrosion/irritation</b>	
<b>Extreme pH</b>	
<b>Serious eye damage/irritation</b>	Not determined.
<b>Germ cell mutagenicity</b>	
<b>Genotoxicity - in vitro</b>	Not determined.
<b>Genotoxicity - in vivo</b>	Not determined.
<b>Carcinogenicity</b>	Not determined.
<b>Reproductive toxicity - fertility</b>	Not determined.
<b>Specific target organ toxicity - single exposure</b>	
<b>STOT - single exposure</b>	Not determined.
<b>Specific target organ toxicity - repeated exposure</b>	
<b>STOT - repeated exposure</b>	Not determined.
<b>Aspiration hazard</b>	Not determined.
<b>General information</b>	No specific health hazards known.
<b>Inhalation</b>	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Liquid may irritate skin.
<b>Eye contact</b>	Vapour or spray in the eyes may cause irritation and smarting.
<b>Acute and chronic health hazards</b>	Because of the product's quantity and composition, the health hazard is regarded as low.
<b>Route of entry</b>	Skin and/or eye contact
<b>Medical symptoms</b>	No specific symptoms noted.

## 12. Ecological Information

### Toxicity

**Acute toxicity - fish** Not determined.

### Persistence and degradability

**Persistence and degradability** There are no data on the degradability of this product.

### Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not determined.

### Mobility in soil

**Mobility** The product is soluble in water.

### Results of PBT and vPvB assessment

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

### Other adverse effects

**Other adverse effects** Not determined.

## 13. Disposal Considerations

### Waste treatment methods

<b>General information</b>	When handling waste, the safety precautions applying to handling of the product should be considered.
<b>Disposal methods</b>	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### **14. Transport Information**

<b>General</b>	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
<b>Road transport notes</b>	Not classified.
<b>Rail transport notes</b>	Not classified.
<b>Sea transport notes</b>	Not classified.
<b>Air transport notes</b>	Not classified.

**UN number** Not applicable.

**UN proper shipping name** Not applicable.

**Transport hazard class(es)** Not applicable.

**Packing group** Not applicable.

### **Environmental hazards**

**Environmentally hazardous substance/marine pollutant** No.

**Special precautions for user** Not applicable.

### **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

### **15. Regulatory Information**

#### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

**Guidance** Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

**Chemical safety assessment** No chemical safety assessment has been carried out.

### **16. Other Information**

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**NFPA:** National Fire Protection Association (USA)  
**HMIS:** Hazardous Materials Identification System (USA)  
**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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