



Material Safety Data Sheet (MSDS)
Revision Date: 11-04-2023

Kit Name: VitroView™ FL594 Conjugated Streptavidin
Catalog#: VB-1114

Components:

VB-1114	VitroView™ FL594 Conjugated Streptavidin
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VB-1114 VitroView™ FL594 Conjugated Streptavidin

1. Identification of the Substance/Mixture and Company

Product Name	VitroView™ FL594 Conjugated Streptavidin
Catalog#	VB-1114
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
Streptavidin	9013-20-1

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

Appearance

Form:	Fluid
Color:	Colorless
Odor:	characteristic organic odor
Odor threshold	Not determined

pH-value	Not determined
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Change in condition

Melting point/Melting range:	Undetermined
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Boiling point/Boiling range:	Undetermined
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Flash point:	Not applicable.
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Flammability (solid, gaseous)	Not applicable.
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Ignition temperature:

Decomposition temperature:	Not determined.
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Auto igniting:	Product is not self-igniting.
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Danger of explosion:	Not determined.
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Explosion limits:

Lower	Not determined
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Upper	Not determined
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Vapor pressure at 20°C (68 °F)	Not determined.
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Density at 20°C (68 °F):	Not determined.
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Relative density:	Not determined.
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Vapour density:	Not determined.
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Evaporation rate:	Not determined.
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Solubility in / Miscibility with Water:	Infinite.
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Segregation coefficient (n-octanol/water)	Not determined
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Dynamic:	Not determined
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Kinematic:	Not determined
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Other information	No further relevant information available.
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10 Stability and Reactivity

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

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