Safety Datasheet (SDS)

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Identifiers

Product Catalog #: **EA2501-1**
Product Name: **AssayMax ™ Human Adenylate Kinase 4 (AK 4) ELISA Kit**

1.2 Relevant Identified Uses

Recommended Use: Intended for the in vitro determination of samples for **Research Use Only**. This product is not intended for use in diagnostic procedures.

1.3 Details of Supplier of this SDS

Supplier Information: Assaypro LLC
3400 Harry S Truman Blvd
St. Charles, MO 63301, USA

Phone: +1-636-447-9175
Phone: +1-636-447-9875
Fax: +1-636-395-7419
Email: support@assaypro.com

1.4 Emergency Phone Number: +1-636-447-9175

2. Hazard Identification

2.1 Classification of Substance/Mixture

Stop solution contains Hydrochloric Acid (0.5N)

Classification of pure ingredient In Accordance with 29 CFR 1910 (OSHA HCS)
Corrosive to metals (Category 1), H290
Skin Irritant (Category 2), H315
Eye Irritant (Category 2), H319

Classification of pure ingredient in accordance with Regulation EC No. 1272/2008 [CLP/GHS]
Corrosive to Metals, Category 1 (H290)
Skin Irritant, Category 2 (H315)
Eye Irritant, Category 2 (H319)

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label Elements

Hazard Pictograms:



Signal Word: WARNING

Hazard Statement:
(H290) May be corrosive to metals

Precautionary Statements:
(P234) Keep only in original container
(P390) Absorb spillage to prevent material damage
(P261) Avoid breathing fume/mist/vapors/spray
(P280) Wear protective gloves/clothing/eye protection/face protection
(P305 + P351 + P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
(P310) Immediately call a POISON CENTER or doctor/physician.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

3. Information on Ingredients

Description:

Stop Solution: Aqueous, proprietary solution that contains 1-5% Hydrochloric Acid.

3.1 Substance

Not applicable.

3.2 Mixture

Contains	CAS No.	EC-No.	Index-No.	Concentration*
Proprietary Solution	N/A	N/A	N/A	95 - 99 %
Hydrochloric Acid	7647-01-0	231-595-7	017-002-01-X	1 – 5 %

**Concentration is reported as a range due to batch variation and to protect confidentiality.*

4. First Aid Measures

4.1 Description of First Aid Measures

General Information: Consult a physician if you feel unwell. Show SDS when necessary.

After Inhalation: Remove to fresh air, seek medical advice. Immediately call a POISON CENTER or consult with a physician.

After Skin Contact: Wash off with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation persists.

After Eye Contact: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists. Immediately call a POISON CENTER or consult with a physician.

After Swallowing: DO NOT induce vomiting. Rinse mouth and drink plenty of water. Immediately call a POISON CENTER or consult with a physician.

4.2 Most Important Symptoms & Effects

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

4.3 Indication of Any Immediate Medical Attention/Special Treatment Needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical, carbon dioxide, or sand.

5.2 Special Hazards Arising from Substance of Mixture

Fire may product irritating, corrosive, and/or toxic gases. Product is acidic.

5.3 Advice for Firefighters

Do not use heavy stream of water. Wear self-contained breathing apparatus if necessary.

6. Accidental Release Measures

6.1 Personal Safety Precautions

Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental Precautions

Keep away from drains.

6.3 Methods and Materials for Containment/Cleanup

Soak up spilled liquid with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal.

6.4 Reference to other sections

For disposal see Section 13.

7. Handling and Storage

7.1 Precautions for Handling

Avoid inhalation of vapor or mist. Wear appropriate PPE when handling.

7.2 Conditions for Safe Storage (Including Incompatibilities)

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. See product labeling for specific storage temperature requirements.

Corrodes metal. Do not store in a secondary container made of metal.

7.3 Specific End Use

Use as a laboratory reagent, for scientific research and development.

8. Exposure Controls/Personal Protection

8.1 Control Parameters

Chemical Identity	Type	Exposure Limit Values	Source
Hydrochloric Acid CAS No. 7647-01-0	Ceiling	2 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	5 ppm 7mg/m³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceiling	5 ppm 7mg/m³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02.2006)

8.2 Exposure Controls

General Information: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory Protection: Not required under normal conditions of use.

Skin Protection: Select glove material impermeable and resistant to the substance. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Eye Protection: Wear equipment for eye protection that is tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. Physical and Chemical Properties

Physical State	Liquid	Color	Colorless
Odor	Slightly pungent	Odor Threshold	Not available
pH	< 1	Melting/Freezing Point	Not available
Boiling Point	Not available	Boiling Range	Not available
Flash Point	Not available	Evaporation Rate	Not available
Flammability	Not available	Upper/Lower Flammability	Not available
Explosive Limits	Not available	Vapor Pressure	Not available
Vapor Density	Not available	Relative Density	Not available
Solubility	Soluble in water	Partition Coefficient	Not available
Auto-Ignition Temp	Not available	Decomposition Temperature	Not available
Viscosity	Not available		

9.2 Other Information

N/A

10. Stability and Reactivity

10.1 Reactivity

No relevant information available.

10.2 Chemical Stability

No decomposition if used and stored according to specifications.

10.3 Possibility of Hazardous Reactions

Reacts with alkaline metals.

10.4 Conditions to Avoid

Strong Heating.

10.5 Incompatible Materials

Various metals.

10.6 Hazardous Decomposition Products

Hydrogen Chloride in case of fire (see Section 5 of this SDS).

11. Toxicological Information

11.1 Information on Toxicological Effects

Acute toxicity:
LD/LC50 values relevant for classification: Quantitative data on the toxicity of this product is not available.
Specific symptoms in biological assay: No information available.

Primary irritant effect:

- **on the skin:** Product can cause light irritation.
- **on the eye:** Product can cause severe irritation.
- **after inhalation:** Product can cause respiratory irritation.

Sensitization: No sensitizing effects known.

CMR effects:

- **Germ cell mutagenicity:** No information available.
- **Carcinogenicity:** No information available.

11.2 Information on Other Hazards

N/A

12. Ecological Information

12.1 Ecotoxicity

Do not empty into drains**.**

12.2 Persistence and Degradability

No data available.

12.3 Bioaccumulative Potential

No data available.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB Assessment

The substance does not fulfill the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6 Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

12.7 Other Adverse Effects

May be harmful to aquatic organisms due to the shift of the pH.

13. Disposal Considerations

13.1 Waste Treatment Methods

Avoid release into the environment. Dispose of in a safe manner in accordance with local/state/national regulations.

14. Transport Information

	Land Transport (ADR/DOT)	Inland Waterway Transport (ADN)	Sea Transport (IMDG)	Air Transport (IATA)
14.1 UN Number	N/A	N/A	N/A	N/A
14.2 UN Proper Shipping Name	N/A	N/A	N/A	N/A
14.3 Transport Hazard Classes	N/A	N/A	N/A	N/A
14.4 Packing Group	N/A	N/A	N/A	N/A
14.5 Environmental Hazards	N/A	N/A	N/A	N/A
14.6 Special Precautions for User	No	N/A	No	No
14.7 Maritime Transport in Bulk	N/A	N/A	N/A	N/A

*Product is not considered dangerous for transport according to the above specifications.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Safety, health and environmental regulations/legislation specific for the substance or mixture: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII: The components of this product are not subject to restrictions.
REACH Authorization - Annex XIV: The components of this product are not subject to authorization.
SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:
Hydrochloric Acid, CAS-No. 7647-01-0
SARA 311/312 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.

Massachusetts Right To Know Components: Hydrochloric Acid, CAS-No. 7647-01-0
Pennsylvania Right To Know Components: Hydrochloric Acid, CAS-No. 7647-01-0
New Jersey Right To Know Components: Hydrochloric Acid, CAS-No. 7647-01-0
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment
For this substance a chemical safety assessment is not required.

16. Other Information

Indication of Changes
This SDS has been revised to reflect current requirements after the adoption of Globally Harmonized Standards and according to Regulation (EC) No 1272/2008 and Regulation (EC) No 2020/878.

Relevant H- and P- Statements (number and full text)

Full Text of Abbreviated H Statements:
(H290) May be corrosive to metals

Full Text of Classifications (Regulation EC No. 1272/2008 [CLP/GHS])
Corrosive to Metals, Category 1
Corrosive to Skin, Category 1B
Serious Eye Damage, Category 1
Specific Target Organ Toxicity-Single Exposure, Category 3
Skin Irritant, Category 2
Eye Irritant, Category 2

Full Text of Precautionary Statements:
(P234) Keep only in original container
(P390) Absorb spillage to prevent material damage
(P261) Avoid breathing dust/fume/gas/mist/vapors/spray
(P280) Wear protective gloves/clothing/eye protection/face protection
(P305 + P351 + P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
(P310) Immediately call a POISON CENTER or doctor/physician.

2. Hazard Identification

2.1 Classification of Substance/Mixture

Wash Buffer Concentrate and Biotinylated Antibody contain Sodium Azide (0.02%)*
EIA Diluent Concentrate contains Sodium Azide (0.01%)*
Not considered hazardous in this concentration. This classification was made according to latest edition of the Globally Harmonized System of Classification and Labeling Chemicals

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Not considered hazardous at this concentration.

Classification in accordance with Regulation EC No. 1272/2008 [CLP/GHS]
Not considered hazardous at this concentration.

2.2 Label Elements

Hazard Pictograms: N/A

Signal Word: N/A

Hazard Statement: N/A

Precautionary Statements: N/A

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
N/A

3. Information on Ingredients

Description:
Wash Buffer Concentrate: Aqueous, proprietary solution that contains 0.02% Sodium Azide
Biotinylated Antibody: Proprietary solution that contains 0.02% Sodium Azide
EIA Diluent Concentrate: Aqueous, proprietary buffer solution that contains 0.01% Sodium Azide

3.1 Substance
Not applicable.

3.2 Mixture

Contains	CAS No.	EC-No.	Index-No.	Concentration
Proprietary Solution	N/A	N/A	N/A	99.98 – 99.99 %
Sodium Azide (NaN_3)	26628-22-8	247-852-1	011-004-00-7	0.02 – 0.01 % *

* *Not hazardous at this concentration.*

4. First Aid Measures

4.1 Description of First Aid Measures

General Information: Consult a physician if you feel unwell. Show SDS when necessary.

After Inhalation: Remove to fresh air, seek medical advice.

After Skin Contact: Wash off with plenty of soap and water. Remove contaminated clothing. Seek medical attention immediately.

After Eye Contact: Rinse with water for several minutes. Seek medical attention immediately.

After Swallowing: DO NOT induce vomiting. Rinse mouth. Consult physician.

4.2 Most Important Symptoms & Effects

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

4.3 Indication of Any Immediate Medical Attention/Special Treatment Needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Use dry powder.

5.2 Special Hazards Arising from Substance of Mixture

Dangerous decomposition is not anticipated.

5.3 Advice for Firefighters

Wear self-contained breathing apparatus if necessary.

6. Accidental Release Measures

6.1 Personal Safety Precautions

Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

6.2 Environmental Precautions

Keep away from drains. Discharge into the environment should be avoided.

6.3 Methods and Materials for Containment/Cleanup

Soak up spilled liquid with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal.

6.4 Reference to Other Sections

For disposal see Section 13.

7. Handling and Storage

7.1 Precautions for Handling

Avoid contact with skin and eyes.

7.2 Conditions for Safe Storage (Including Incompatibilities)

Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids. See product labeling for specific storage temperature requirements.

7.3 Specific End Use

Use as a laboratory reagent, for scientific research and development.

8. Exposure Controls/Personal Protection

8.1 Control Parameters

Chemical Identity	Type	Exposure Limit Values	Source
Sodium Azide CAS No. 26628-22-8	Ceiling	0.100000 ppm	US. NIOSH Recommended Exposure Limits
	Ceiling	0.300000 mg/m^3	US. NIOSH Recommended Exposure Limits – Potential for Dermal Absorption
	Ceiling	0.110000 ppm	US. ACGIH Threshold Limit Values – Potential for Dermal Absorption

8.2 Exposure Controls

Appropriate Engineering Controls: Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling product.

General Information: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).

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

Eye Protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. Physical and Chemical Properties

Physical State	Liquid	Color	Colorless to cloudy
Odor	Not available	Odor Threshold	Not available
pH	Not available	Melting/Freezing Point	Not available
Boiling Point	Not available	Boiling Range	Not available
Flash Point	Not available	Evaporation Rate	Not available
Flammability	Not available	Upper/Lower Flammability	Not available
Explosive Limits	Not available	Vapor Pressure	Not available
Vapor Density	Not available	Relative Density	Not available
Solubility	Soluble in water	Partition Coefficient	Not available
Auto-Ignition Temp	Not available	Decomposition Temperature	Not available
Viscosity	Not available		

9.2 Other Information

N/A

10. Stability and Reactivity

10.1 Reactivity
No relevant information available.

10.2 Chemical Stability
Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions
No relevant information available.

10.4 Conditions to Avoid
An explosion occurred when a mixture of sodium azide, methylene chloride, dimethyl sulfoxide, and sulfuric acid were being concentrated on a rotary evaporator.

10.5 Incompatible Materials
Halogenated hydrocarbon, metals, acids, acid chlorides, hydrazine, dimethyl sulfate, inorganic acid chlorides.

10.6 Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions—sodium oxides.
Other decomposition products – no data available.
In the event of a fire, see Section 5.

11. Toxicological Information

11.1 Information on Toxicological Effects

Acute toxicity:
LD50 Oral – rat: 72 mg/kg

Inhalation: No data available.

Dermal: No data available.

Skin corrosion/irritation
May be harmful if absorbed through the skin; may cause skin irritation.

Serious eye damage/eye irritation:
May cause eye irritation.

Respiratory or skin sensitization:
No sensitizing effects known.

Carcinogenicity:
No effect known.

Reproductive toxicity:
No toxic effect known.

Specific target organ toxicity - single exposure:
No data available.

Specific target organ toxicity - repeated exposure:
No data available.

Aspiration hazard:
May be harmful if inhaled; may cause respiratory tract irritation.

Additional Information:
RTECS not available.

11.2 Information on Other Hazards
N/A

12. Ecological Information

12.1 Ecotoxicity
Toxicity to fish: Mortality LC50 – *Pimephales promelas* (fathead minnow) – 5.46 mg/L – 96 h (OECD Test Guideline

203) Toxicity to algae: Static test EC50 - *Pseudokirchneriella subcapitata* – 0.35 mg/L – 96 h (OECD Test Guideline 201)

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Endocrine Disrupting Properties
No data available.

12.7 Other adverse effects
Sodium azide is toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.

13. Disposal Considerations

13.1 Waste treatment methods
Product: Dispose of waste in accordance to applicable national, regional, or local regulations.

Contaminated packaging: Dispose of as unused product.

Special precautions: Avoid dispersal of spilt material to soil, waterways, drains, and sewers.

14. Transport Information

	Land Transport (ADR/DOT)	Inland Waterway Transport (ADN)	Sea Transport (IMDG)	Air Transport (IATA)
14.1 UN Number	N/A	N/A	Not Regulated	Not Regulated
14.2 UN Proper Shipping Name	N/A	N/A	Not Regulated	Not Regulated
14.3 Transport Hazard Classes	N/A	N/A	Not Regulated	Not Regulated
14.4 Packing Group	N/A	N/A	Not Regulated	Not Regulated
14.5 Environmental Hazards	N/A	N/A	Not Regulated	Not Regulated
14.6 Special Precautions for User	No	No	No	No
14.7 Maritime Transport in Bulk	N/A	N/A	Not Regulated	Not Regulated

*Product is not considered dangerous for transport according to the above specifications.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Safety, health and environmental regulations/legislation specific for the substance or mixture: Ensure all national/local regulations are observed.
SARA 302 Components: The following components are subject to reporting levels established by SARA Title III, Section 302:
Sodium Azide, CAS-No. 26628-22-8
SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:
Sodium Azide, CAS-No. 26628-22-8
SARA 311/312 Components: The following components are subject to reporting levels established by SARA Title III, Section 311/312:
Sodium Azide, CAS-No. 26628-22-8

Massachusetts Right To Know Components: Sodium Azide, CAS-No. 26628-22-8
Pennsylvania Right To Know Components: Sodium Azide, CAS-No. 26628-22-8
New Jersey Right To Know Components: Sodium Azide, CAS-No. 26628-22-8
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment
For this substance, a chemical safety assessment is not required.

16. Other Information

Indication of Changes
This SDS has been revised to reflect current requirements after the adoption of Globally Harmonized Standards and according to Regulation (EC) No 1272/2008 and Regulation (EC) No 2020/878.

2. Hazard Identification

2.1 Classification of Substance/Mixture

Chromogen Substrate contains 3,3',5,5' – Tetramethylbenzidine (< 0.06%)* in a proprietary buffer
Not considered hazardous in this concentration. This classification was made according to latest edition of the Globally Harmonized System of Classification and Labeling Chemicals

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Not considered hazardous at this concentration.

Classification in accordance with Regulation EC No. 1272/2008 [CLP/GHS]
Not considered hazardous at this concentration.

2.2 Label Elements

Hazard Pictograms: N/A

Signal Word: N/A

Hazard Statement: N/A

Precautionary Statements: N/A

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
N/A

3. Information on Ingredients

Description:

Chromogen Substrate: Aqueous, proprietary solution that contains < 0.06% 3,3',5,5' – Tetramethylbenzidine

3.1 Substance

Not applicable.

3.2 Mixture

Contains	CAS No.	EC-No.	Index-No.	Concentration
Proprietary Solution	N/A	N/A	N/A	> 99.94 %
3,3',5,5' – Tetramethylbenzidine	54827-17-7	259-364-6	N/A	< 0.06 % *

* *Not hazardous at this concentration.*

4. First Aid Measures

4.1 Description of First Aid Measures

General Information: Consult a physician if you feel unwell. Show SDS when necessary.

After Inhalation: Remove to fresh air, seek medical advice.

After Skin Contact: Wash off with plenty of soap and water. Remove contaminated clothing. Seek medical attention if needed.

After Eye Contact: Rinse with water for several minutes. Seek medical attention immediately.

After Swallowing: DO NOT induce vomiting. Rinse mouth. Consult physician.

4.2 Most Important Symptoms & Effects

No information is available. To the best of our knowledge, the chemical, physical, and toxicological properties of the product have not been thoroughly investigated.

4.3 Indication of Any Immediate Medical Attention/Special Treatment Needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

No known restrictions; use any means suitable for nearby fire.

5.2 Special Hazards Arising from Substance of Mixture

Toxic gases and vapors may be released if involved in a fire, including oxides of carbon, nitrogen, and formation of hydrochloric acid.

5.3 Advice for Firefighters

Wear full protective clothing and a self-contained breathing apparatus if necessary.

6. Accidental Release Measures

6.1 Personal Safety Precautions
Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

6.2 Environmental Precautions
Keep away from drains. Discharge into the environment should be avoided.

6.3 Methods and Materials for Containment/Cleanup
Soak up spilled liquid with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7. Handling and Storage

7.1 Precautions for Handling
Avoid contact with skin and eyes. Allow only portion to be used to equilibrate to ambient temperature. Pour from container, do not insert anything into container, and do not return substrate back into original container. Cap container tightly immediately after use. Minimize mist formation. Observe good chemical hygiene.

7.2 Conditions for Safe Storage (Including Incompatibilities)
Store unused portions in tightly sealed containers in the dark. See product labeling for specific storage temperature requirements.

7.3 Specific End Use
Use as a laboratory reagent for scientific research and development.

8. Exposure Controls/Personal Protection

8.1 Control Parameters
No data available.

8.2 Exposure Controls
Appropriate Engineering Controls: Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling product.

General Information: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory Protection: In case of inadequate ventilation, use approved respirator with an organic vapor cartridge.

Skin Protection: Wear suitable chemical resistant gloves, lab coat, or other suitable chemical protective clothing.

Eye Protection: Splash goggles or safety glasses with side shields recommended.

9. Physical and Chemical Properties

Physical State	Liquid	Color	Colorless
Odor	Not available	Odor Threshold	Not available
pH	Not available	Melting/Freezing Point	Not available
Boiling Point	Not available	Boiling Range	Not available
Flash Point	Not available	Evaporation Rate	Not available
Flammability	Not available	Upper/Lower Flammability	Not available
Explosive Limits	Not available	Vapor Pressure	Not available
Vapor Density	Not available	Relative Density	Not available
Solubility	Soluble in water	Partition Coefficient	Not available
Auto-Ignition Temp	Not available	Decomposition Temperature	Not available

Viscosity	Not available		

9.2 Other Information
N/A

10. Stability and Reactivity

10.1 Reactivity
No relevant information available.

10.2 Chemical Stability
Stable under recommended use and storage conditions.

10.3 Possibility of Hazardous Reactions
No relevant information available.

10.4 Conditions to Avoid
Prolonged exposure to elevated temperature and light may cause blue or yellow color formation, and reduced reactivity.

10.5 Incompatible Materials
Strong oxidizing agents, strong acids. Contact with metals or metal surfaces may cause blue or yellow color formation.

10.6 Hazardous Decomposition Products
High temperature or fire conditions may cause toxic vapor formation, including oxides of carbon, nitrogen, and formation of hydrogen chloride gas. In the event of a fire, see Section 5.

11. Toxicological Information

11.1 Information on Toxicological Effects

Acute toxicity:
Not classified as acutely toxic by oral, dermal, or inhalation routes.

Inhalation: There may be a slight irritation of the throat with a feeling of tightness in the chest.

Dermal: No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/eye irritation:
No data available.

Respiratory or skin sensitization:
No sensitizing effects known.

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

Reproductive toxicity:
No data available.

Specific target organ toxicity - single exposure:
No data available.

Specific target organ toxicity - repeated exposure:
No data available.

Aspiration hazard:
May be harmful if inhaled; may cause respiratory tract irritation.

Additional Information:
RTECS not available.

11.2 Information on Other Hazards
N/A

12. Ecological Information

12.1 Ecotoxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Endocrine Disrupting Properties
No data available

12.7 Other adverse effects
N/A

13. Disposal Considerations

13.1 Waste treatment methods
Product: Dispose of waste in accordance to applicable national, regional, or local regulations.

Contaminated packaging: Dispose of as unused product.

Special precautions: Avoid dispersal of spilt material to soil, waterways, drains, and sewers.

14. Transport Information

	Land Transport (ADR/DOT)	Inland Waterway Transport (ADN)	Sea Transport (IMDG)	Air Transport (IATA)
14.1 UN Number	N/A	N/A	Not Regulated	Not Regulated
14.2 UN Proper Shipping Name	N/A	N/A	Not Regulated	Not Regulated
14.3 Transport Hazard Classes	N/A	N/A	Not Regulated	Not Regulated
14.4 Packing Group	N/A	N/A	Not Regulated	Not Regulated
14.5 Environmental Hazards	N/A	N/A	Not Regulated	Not Regulated

14.6 Special Precautions for User	No	No	No	No
14.7 Maritime Transport in Bulk	N/A	N/A	N/A	N/A

*Product is not considered dangerous for transport according to the above specifications.

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

Not relevant

15. Regulatory Information

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

Safety, health and environmental regulations/legislation specific for the substance or mixture: Ensure all national/local regulations are observed.
SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.
SARA 311/312 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components: 3,3',5,5'-Tetramethylbenzidine, CAS-No. 54827-17-7
New Jersey Right To Know Components: 3,3',5,5'-Tetramethylbenzidine, CAS-No. 54827-17-7
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment

For this substance, a chemical safety assessment is not required.

16. Other Information

Indication of Changes

This SDS has been revised to reflect current requirements after the adoption of Globally Harmonized Standards and according to Regulation (EC) No 1272/2008 and Regulation (EC) No 2020/878.

2. Hazard Identification

2.1 Classification of Substance/Mixture

Streptavidin-Peroxidase Conjugate (SP Conjugate) contains Ethylene Glycol (40-60%)

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity (oral), Category 4 (H302)

Classification of Pure Ingredient in accordance with Regulation EC No. 1272/2008 [CLP/GHS]
Acute toxicity (oral), Category 4 (H302)
Specific target organ toxicity – repeated exposure (oral), Category 2 (H373)

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label Elements

Hazard Pictograms:



Signal Word: WARNING

Hazard Statement:
(H302) Harmful if swallowed

Precautionary Statements:
(P264) Wash skin thoroughly after handling
(P270) Do not eat, drink or smoke when using this product
(P301 + P312 + P330) IF SWALLOWED: Call a POISON CENTER/doctor; rinse mouth
(P314) Get medical advice/attention if you feel unwell
(P501) Dispose of contents/container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

3. Information on Ingredients

Description:

SP Conjugate: Proprietary mixture that contains 40-60% Ethylene Glycol

3.1 Substance

Not applicable

3.2 Mixture

Contains	CAS No.	EC-No.	Index-No.	Concentration*
Proprietary Mixture	N/A	N/A	N/A	40 – 60 %
Ethylene Glycol	107-21-1	203-473-3	603-027-00-1	40 – 60 %

**Concentration is reported as a range due to batch variation and to protect confidentiality.*

4. First Aid Measures

4.1 Description of First Aid Measures

General Information: Consult a physician if you feel unwell. Show SDS when necessary.

After Inhalation: Move person to fresh air; if effects occur, consult a physician.

After Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

After Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

After Swallowing: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most Important Symptoms & Effects

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

4.3 Indication of Any Immediate Medical Attention/Special Treatment Needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special Hazards Arising from Substance of Mixture

Carbon dioxide and/or carbon monoxide may form during decomposition.

5.3 Advice for Firefighters

Wear self-contained breathing apparatus if necessary.

6. Accidental Release Measures

6.1 Personal Safety Precautions

Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental Precautions

Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and Materials for Containment/Cleanup

Soak up spilled liquid with inert absorbent material.

6.4 Reference to other sections

For disposal see Section 13.

7. Handling and Storage

7.1 Precautions for Handling

See Section 8 for more detail. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use adequate ventilation and/or wear appropriate respirator.

7.2 Conditions for Safe Storage (Including Incompatibilities)

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. See product labeling for specific storage temperature requirements.

7.3 Specific End Use

Use as a laboratory reagent, for scientific research and development.

8. Exposure Controls/Personal Protection

8.1 Control Parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure Controls

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands beforebreaks and at the end of workday.

General Information: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of useor handling.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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 asNIOSH (US) or CEN (EU).

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

Eye Protection: Tightly fitting safety goggles or a face shield (8-inch minimum) may be used. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) orEN 166(EU).

9. Physical and Chemical Properties

Physical State	Liquid	Color	Translucent yellow-orange
Odor	Not available	Odor Threshold	Not available
pH	Not available	Melting/Freezing Point	Not available
Boiling Point	Not available	Boiling Range	Not available
Flash Point	Not available	Evaporation Rate	Not available
Flammability	Not available	Upper/Lower Flammability	Not available
Explosive Limits	Not available	Vapor Pressure	Not available
Vapor Density	Not available	Relative Density	Not available
Solubility	Soluble in water	Partition Coefficient	Not available
Auto-Ignition Temp	Not available	Decomposition Temperature	Not available
Viscosity	Not available		

9.2 Other Information

N/A

10. Stability and Reactivity

10.1 Reactivity

Not known.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

Hazardous reactions have not been reported.

10.4 Conditions to Avoid

No relevant information available.

10.5 Incompatible Materials
No dangerous reactions known under conditions of normal use.

10.6 Hazardous Decomposition Products
No known hazardous decomposition products.

11. Toxicological Information

11.1 Information on Toxicological Effects

Acute toxicity of pure ingredient:
LD50 Oral – rat: 4700 mg/kg

Inhalation: Conclusive, but not sufficient for classification.

Dermal: No data available.

Skin corrosion/irritation: Conclusive, but not sufficient for classification.

Serious eye damage/eye irritation: Conclusive, but not sufficient for classification.

Respiratory or skin sensitization: Conclusive, but not sufficient for classification.

Carcinogenicity: Conclusive, but not sufficient for classification.

Reproductive toxicity: Conclusive, but not sufficient for classification.

Specific target organ toxicity - single exposure: Conclusive, but not sufficient for classification.

Specific target organ toxicity - repeated exposure: Conclusive, but not sufficient for classification.

11.2 Information on Other Hazards
N/A

12. Ecological Information

12.1 Ecotoxicity
Toxicity to algae: Static test EC50 - *Pseudokirchneriella subcapitata* – EC506500 - 13000 mg/L – 96 h

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
The substance does not fulfill the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6 Endocrine Disrupting Properties
No data available

12.7 Other adverse effects
No information available.

13. Disposal Considerations

13.1 Waste treatment methods
Product: 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 accordance to approved disposal techniques. Disposal of this product, its solutions, or any by-products shall comply with the requirements of all applicable local, regional, and national/federal guidelines.

Contaminated packaging: Dispose of as unused product.

14. Transport Information

	Land Transport (ADR/DOT)	Inland Waterway Transport (ADN)	Sea Transport (IMDG)	Air Transport (IATA)
14.1 UN Number	N/A	N/A	Not Regulated	Not Regulated
14.2 UN Proper Shipping Name	N/A	N/A	Not Regulated	Not Regulated
14.3 Transport Hazard Classes	N/A	N/A	Not Regulated	Not Regulated
14.4 Packing Group	N/A	N/A	Not Regulated	Not Regulated
14.5 Environmental Hazards	N/A	N/A	Not Regulated	Not Regulated
14.6 Special Precautions for User	No	No	No	No
14.7 Maritime Transport in Bulk	N/A	N/A	N/A	N/A

*Product is not considered dangerous for transport according to the above specifications.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Safety, health and environmental regulations/legislation specific for the substance or mixture: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII: The components of this product are not subject to restrictions.
REACH Authorization - Annex XIV: The components of this product are not subject to authorization.
SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:
Ethylene Glycol, CAS-No. 107-21-1
SARA 311/312 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.

Massachusetts Right To Know Components: Ethylene Glycol, CAS-No. 107-21-1
Pennsylvania Right To Know Components: Ethylene Glycol, CAS-No. 107-21-1
New Jersey Right To Know Components: Ethylene Glycol, CAS-No. 107-21-1
California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical Safety Assessment
For this substance a chemical safety assessment is not required.

16. Other Information

Indication of Changes

This SDS has been revised to reflect current requirements after the adoption of Globally Harmonized Standards and according to Regulation (EC) No 1272/2008 and Regulation (EC) No 2020/878.

Relevant H- and P- Statements (number and full text)

Full Text of Abbreviated H Statements:
(H302) Harmful if swallowed

Full Text of Classifications (Regulation EC No. 1272/2008 [CLP/GHS])
Acute oral toxicity, Category 4

Full Text of Precautionary Statements:
(P264) Wash skin thoroughly after handling
(P270) Do not eat, drink or smoke when using this product
(P301 + P312 + P330) IF SWALLOWED: Call a POISON CENTER/doctor; rinse mouth
(P314) Get medical advice/attention if you feel unwell
(P501) Dispose of contents/container to an approved waste disposal plant

HMIS Rating
Health hazard: 2
Flammability: 0
Physical Hazard 0

NFPA Rating
Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0

END OF SDS

Notice to reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its distributors, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The user is responsible for determining what type of PPE is appropriate for handling these materials.