

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go[®] Lys-to-Lys Protein-Protein Conjugation Kit
Kit component : Desalting Spin Columns
Product code : CCT-1008

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

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

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Desalting Spin Columns	CAS-No.: N/A	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

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SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

4.2. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.3. Most important symptoms and effects, both acute and delayed

Not Applicable

4.4. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

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

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7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Desalting Spin Columns

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ 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/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

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Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

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

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12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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 accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Desalting Spin Columns	CAS-No. N/A
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15.2. SARA 313 Components

This product is not regulated by SARA

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

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go[®] Lys-to-Lys Protein-Protein Conjugation Kit
Kit component : DMSO
Product code : CCT-1008

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable liquids: Category 4

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS-US) :



Signal word (GHS-US): Warning

Hazard statements (GHS-US): Combustible liquid

Precautionary statements (GHS-US) :

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved

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

None

Other hazards

DMSO readily penetrates skin and may carry other dissolved chemicals into the body.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
DMSO	CAS-No.: 67-68-5	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.
In case of skin contact	: Remove affected clothing and wash all exposed skin area with water for at least 15 minutes. Get medical attention if symptoms occur.
In case of eye contact	: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Obtain medical attention.
If swallowed	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Alcohol-resistant foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

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5.3. Further information

Flash Point 87 °C / 188.6 °F
Method No data available
Autoignition Temperature 301 °C / 573.8 °F
Explosion Limits
Upper 42 vol %
Lower 2.6 vol %
Sensitivity to Mechanical Impact No data available
Sensitivity to Static Discharge No data available

Specific Hazards Arising from the Chemical

Combustible material. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides. Sulfides. Formaldehyde.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2*	2	1	N/A

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. Remove all sources of ignition. See Section 8 for more detail.

6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Remove all sources of ignition. Take up mechanically with inert absorbent material, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

7.3. Specific end use(s)

For research use only.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DMSO

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

8.3. Individual protection measures/ 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/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Liquid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : 18.4°C and 65.1°F
Initial boiling point & boiling range : 189°C and 372.2°F
Flash point : 87°C and 188.6°F
Evaporation rate : No data available
Flammability (solid, gas) : Non-flammable
Explosive limits : Upper 42 vol %
Lower 2.6 vol %
Vapor pressure : 0.55 mbar @ 20°C
Vapor density : 2.7
Specific gravity : 1.100
Water solubility : Soluble in water

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Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : 301°C and 573.8°F
Decomposition temperature : > 190°C
Viscosity : > 190°C

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Hygroscopic

10.3. Possibility of hazardous reactions

Thermal decomposition can take place above 189°C / 372°F.

10.4. Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Alkali metals.

10.6. Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides, Sulfides, Formaldehyde

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact
Acute Toxicity : Oral; Harmful if swallowed

11.2. Principal Routes of Exposure

Irritation : No data available
Corrosivity : No data available
Sensitization : No data available
STOT - Single Exposure : No data available
STOT - Repeated Exposure : No data available
Carcinogenicity : The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Dimethyl sulfoxide	67-68-5	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenicity : No data available
Reproductive toxicity : No data available
Aspiration hazard : No data available

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SECTION 12: Ecological information

12.1. Toxicity

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

Chemical name	Freshwater Algae	Freshwater Fish	<u>Microtox</u>	Water Flea
Dimethyl sulfoxide	EC50 96 h 12350-25500 mg/L	40 g/L LC50 96 h 33-37 g/l LC50 96 h	= 16000 mg/L EC50 <u>Pseudomonas putida 16</u> h = 32 g/L EC50 Tetrahymena pyriformis 24 h = 77 mg/L EC50 Photobacterium <u>phosphoreum 5 min</u>	EC50 24 h 7000 mg/L

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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 accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

COMBUSTIBLE LIQUID, NOT REGULATED FOR TRANSPORT IN THIS QUANTITY According to 49 CFR §173.150(f)(1), this material should be reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk.

UN number : NA1993
UN proper shipping name : Combustible liquid, n.o.s.
Transport hazard class(es) : Not applicable
Packing group : III – Minor danger

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Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL : Not applicable
73/78 and the IBC Code

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

DMSO	CAS-No. 67-68-5
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15.2. SARA 313 Components

This product is not regulated by SARA

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

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

Revision date : 12/06/2021

Other information : None.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go[®] Lys-to-Lys Protein-Protein Conjugation Kit
Kit component : Saline Buffer Pack
Product code : CCT-1008

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

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

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Saline Buffer Pack	CAS-No.: N/A	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

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SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

4.2. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.3. Most important symptoms and effects, both acute and delayed

Not Applicable

4.4. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

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

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7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Saline Buffer Pack

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ 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/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

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Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

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

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12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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 accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Saline Buffer Pack	CAS-No. N/A
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Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
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15.2. SARA 313 Components

This product is not regulated by SARA

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

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&Go[®] Lys-to-Lys Protein-Protein Conjugation Kit
Kit component : TCO Reagent
Synonym : TCO-PEG4-NHS Ester
Product code : CCT-1008

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

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

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
TCO Reagent	CAS-No.: 1621096-79-4	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (l)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
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SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

4.2. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.3. Most important symptoms and effects, both acute and delayed

Not Applicable

4.4. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

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

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TCO Reagent

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ 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/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
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Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

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

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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 accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

TCO Reagent	CAS-No. 1621096-79-4
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Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



15.2. SARA 313 Components

This product is not regulated by SARA

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

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&Go[®] Lys-to-Lys Protein-Protein Conjugation Kit
Kit component : Tetrazine Reagent
Synonym : Methyltetrazine-PEG4-STP Ester
Product code : CCT-1008

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

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

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Tetrazine Reagent	CAS-No.: N/A	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

4.2. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.3. Most important symptoms and effects, both acute and delayed

Not Applicable

4.4. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

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

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tetrazine Reagent

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ 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/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

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

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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 accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Tetrazine Reagent	CAS-No. N/A
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Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/26/2023



15.2. SARA 313 Components

This product is not regulated by SARA

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

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.