


# SAFETY DATA SHEET

## Muse® Autophagy LC3-antibody based Kit, Muse® Autophagy Assay Reagent Pack

### Section 1. Identification

<b>GHS product identifier</b>	: Muse Autophagy LC3-antibody based Kit, Muse Autophagy Assay Reagent Pack
<b>Other means of identification</b>	: <b>MCH200109</b> <b>CS208164</b> 20X Anti-LC3 AlexaFluor™ 555, clone 4E12 <b>CF200093</b> Muse Autophagy Assay Reagent Pack <b>CF200093</b> <b>CS202124</b> 5X Assay Buffer <b>CS208215</b> Autophagy Reagent B <b>CS208212</b> Autophagy Reagent A
<b>Product type</b>	: Liquid.
<b>Code</b>	:
<b>Identified uses</b>	: For Professional use only. Use as per Product Insert.
<b>Supplier/Manufacturer</b>	: Luminex Corporation 12212 Technology Blvd Austin, Texas 78727 Tel: 1-512-381-4397 Toll free: 1-877-785-2323 (US and Canada) Fax: 1-512-219-5114 <a href="http://www.luminexcorp.com">http://www.luminexcorp.com</a>
<b>e-mail address of person responsible for this SDS</b>	: <a href="mailto:Support@Luminexcorp.com">Support@Luminexcorp.com</a>
<b>Emergency telephone number (with hours of operation)</b>	: 1-512-381-4397 24/7

### Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: ACUTE TOXICITY (oral) - Category 4 AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3
<b>GHS label elements for the kit</b>	
<b>Hazard pictograms</b>	: 
<b>Signal word</b>	: Warning
<b>Hazard statements</b>	: H302 - Harmful if swallowed. H412 - Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>Prevention</b>	: P273 - Avoid release to the environment. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.



## Section 2. Hazards identification

- Response** : P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### GHS label elements by compartment

**Hazard pictograms** : CS208212



**Signal word** : CS202124 No signal word.  
 CS208215 No signal word.  
 CS208212 Warning  
 CS208164 No signal word.

**Hazard statements** : CS202124 H412 - Harmful to aquatic life with long lasting effects.  
 CS208215 No known significant effects or critical hazards.  
 CS208212 H302 - Harmful if swallowed.  
 CS208164 No known significant effects or critical hazards.

### Precautionary statements

**Prevention** : CS202124 P273 - Avoid release to the environment.  
 CS208215 Not applicable.  
 CS208212 P270 - Do not eat, drink or smoke when using this product.  
 P264 - Wash hands thoroughly after handling.  
 CS208164 Not applicable.

**Response** : CS202124 Not applicable.  
 CS208215 Not applicable.  
 CS208212 P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.  
 CS208164 Not applicable.

**Storage** : CS202124 Not applicable.  
 CS208215 Not applicable.  
 CS208212 Not applicable.  
 CS208164 Not applicable.

**Disposal** : CS202124 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  
 CS208215 Not applicable.  
 CS208212 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  
 CS208164 Not applicable.

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
<b>CS202124</b> Sodium Azide	0.1 - 1	26628-22-8
<b>CS208212</b> Chloroquine bis(phosphate)	80 - 100	50-63-5
<b>CS208164</b> Albumins, Blood Serum	1 - 5	9048-46-8

United States: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

Canada: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

#### Description of necessary first aid measures

- Eye contact** : Not applicable.
- Inhalation** : Not applicable.
- Skin contact** : Not applicable.
- Ingestion** : 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.

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

##### Potential acute health effects

- Eye contact** : **CS202124** No known significant effects or critical hazards.  
**CS208215** No known significant effects or critical hazards.  
**CS208212** No known significant effects or critical hazards.  
**CS208164** No known significant effects or critical hazards.
- Inhalation** : **CS202124** No known significant effects or critical hazards.  
**CS208215** No known significant effects or critical hazards.  
**CS208212** No known significant effects or critical hazards.  
**CS208164** No known significant effects or critical hazards.
- Skin contact** : **CS202124** No known significant effects or critical hazards.  
**CS208215** No known significant effects or critical hazards.  
**CS208212** No known significant effects or critical hazards.  
**CS208164** No known significant effects or critical hazards.
- Ingestion** : **CS202124** No known significant effects or critical hazards.  
**CS208215** No known significant effects or critical hazards.  
**CS208212** Harmful if swallowed.  
**CS208164** No known significant effects or critical hazards.

##### Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.

## Section 4. First aid measures

- Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : None identified.  
**Specific treatments** : No specific treatment.  
**Protection of first-aiders** : No special measures required.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.  
**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides  
halogenated compounds

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Put on appropriate personal protective equipment.  
**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : No special requirements.

### Methods and materials for containment and cleaning up

- Spill** : Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store at 2°C to 8°C.

## Section 8. Exposure controls/personal protection

### Control parameters

#### United States

##### Occupational exposure limits

Ingredient name	Exposure limits
<b>CS202124</b> Sodium Azide	<b>ACGIH TLV (United States, 3/2018).</b> C: 0.29 mg/m <sup>3</sup> , (as sodium azide) C: 0.11 ppm, (as Hydrazoic acid vapor) <b>NIOSH REL (United States, 10/2016). Absorbed through skin.</b> CEIL: 0.1 ppm, (as HN3) CEIL: 0.3 mg/m <sup>3</sup> , (NAN3)
<b>CS208212</b> Chloroquine bis(phosphate)	None.
<b>CS208164</b> Albumins, Blood Serum	None.

#### Canada

##### Occupational exposure limits

Ingredient name	Exposure limits
<b>CS202124</b> Sodium Azide	<b>CA Ontario Provincial (Canada, 1/2018).</b> C: 0.29 mg/m <sup>3</sup> , (Dust and fumes) Form: Dust and fumes C: 0.11 ppm, (as Hydrazoic acid vapor) <b>CA Alberta Provincial (Canada, 6/2018).</b> C: 0.11 ppm, (Hydrazoic acid vapors) 15 min OEL: 0.3 mg/m <sup>3</sup> , (Hydrazoic acid vapors) 15 minutes. C: 0.29 mg/m <sup>3</sup> <b>CA British Columbia Provincial (Canada, 7/2018).</b> C: 0.29 mg/m <sup>3</sup> , (as sodium azide) C: 0.11 ppm, (as Hydrazoic acid vapor) <b>CA Quebec Provincial (Canada, 1/2014).</b> STEV: 0.11 ppm 15 minutes. STEV: 0.3 mg/m <sup>3</sup> 15 minutes. <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> CEIL: 0.11 ppm, (measured as hydrazoic acid vapor) CEIL: 0.29 mg/m <sup>3</sup> , (measured as sodium azide)

**Appropriate engineering controls** : No special ventilation requirements.

**Environmental exposure controls** : No special measures required.

### Individual protection measures



## Section 8. Exposure controls/personal protection

<b>Hygiene measures</b>	: Follow good industrial hygiene practice.
<b>Eye/face protection</b>	: Not required under normal conditions of use.
<b>Skin protection</b>	
<b>Hand protection</b>	: Not required under normal conditions of use.
<b>Body protection</b>	: Not required under normal conditions of use.
<b>Other skin protection</b>	: Not required under normal conditions of use.
<b>Respiratory protection</b>	: Not required under normal conditions of use.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: <b>CS202124</b>	Liquid. [Clear.]
	<b>CS208215</b>	Liquid. [Clear.]
	<b>CS208212</b>	Solid. [Crystalline.]
	<b>CS208164</b>	Liquid. [Clear.]
<b>Color</b>	: <b>CS202124</b>	Colorless.
	<b>CS208215</b>	Colorless.
	<b>CS208212</b>	Beige.
	<b>CS208164</b>	Colorless.
<b>Odor</b>	: <b>CS202124</b>	Odorless.
	<b>CS208215</b>	None known.
	<b>CS208212</b>	Odorless.
	<b>CS208164</b>	Odorless.
<b>Odor threshold</b>	: Not available.	
<b>pH</b>	: <b>CS202124</b>	Not available.
	<b>CS208215</b>	Not available.
	<b>CS208212</b>	Not available.
	<b>CS208164</b>	Not available.
<b>Melting point</b>	: Not available.	
<b>Initial boiling point and boiling range</b>	: <b>CS202124</b>	Not available.
	<b>CS208215</b>	Not available.
	<b>CS208212</b>	Not available.
	<b>CS208164</b>	Not available.
<b>Flash point</b>	: <b>CS202124</b>	Not available.
	<b>CS208215</b>	Not available.
	<b>CS208212</b>	Not available.
	<b>CS208164</b>	Not available.
<b>Evaporation rate</b>	: Not available.	
<b>Flammability (solid, gas)</b>	: Not available.	
<b>Lower and upper explosive (flammable) limits</b>	: Not available.	
<b>Vapor pressure</b>	: <b>CS202124</b>	Not available.
	<b>CS208215</b>	Not available.
	<b>CS208212</b>	Not available.
	<b>CS208164</b>	Not available.
<b>Vapor density</b>	: <b>CS202124</b>	Not available.
	<b>CS208215</b>	Not available.
	<b>CS208212</b>	Not available.
	<b>CS208164</b>	Not available.

## Section 9. Physical and chemical properties

**Relative density** : CS202124 Not available.  
 CS208215 Not available.  
 CS208212 Not available.  
 CS208164 Not available.

**Solubility** : CS202124 Not available.  
 CS208215 Not available.  
 CS208212 Not available.  
 CS208164 Not available.

**Partition coefficient: n-octanol/water** : Not available.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : CS202124 Not available.  
 CS208215 Not available.  
 CS208212 Not available.  
 CS208164 Not available.

**Flow time (ISO 2431)** : Not available.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : CS202124 The product is stable.  
 CS208215 The product is stable.  
 CS208212 The product is stable.  
 CS208164 The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : CS202124 No specific data.  
 CS208215 No specific data.  
 CS208212 No specific data.  
 CS208164 No specific data.

**Incompatible materials** : CS202124 Reactive or incompatible with the following materials: oxidizing materials.  
 CS208215 Reactive or incompatible with the following materials: oxidizing materials.  
 CS208212 Reactive or incompatible with the following materials: oxidizing materials.  
 CS208164 Reactive or incompatible with the following materials: oxidizing materials.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
CS202124 Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
CS208212 Chloroquine bis(phosphate)	LD50 Oral	Rat	623 mg/kg	-

#### Irritation/Corrosion

There is no data available.

#### Sensitization

There is no data available.

#### Mutagenicity

There is no data available.

#### Carcinogenicity

There is no data available.

#### Reproductive toxicity

There is no data available.

#### Teratogenicity

There is no data available.

#### Specific target organ toxicity (single exposure)

There is no data available.

#### Specific target organ toxicity (repeated exposure)

There is no data available.

#### Aspiration hazard

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

#### Potential acute health effects

<b>Eye contact</b>	: CS202124	No known significant effects or critical hazards.
	CS208215	No known significant effects or critical hazards.
	CS208212	No known significant effects or critical hazards.
	CS208164	No known significant effects or critical hazards.
<b>Inhalation</b>	: CS202124	No known significant effects or critical hazards.
	CS208215	No known significant effects or critical hazards.
	CS208212	No known significant effects or critical hazards.
	CS208164	No known significant effects or critical hazards.
<b>Skin contact</b>	: CS202124	No known significant effects or critical hazards.
	CS208215	No known significant effects or critical hazards.
	CS208212	No known significant effects or critical hazards.
	CS208164	No known significant effects or critical hazards.
<b>Ingestion</b>	: CS202124	No known significant effects or critical hazards.
	CS208215	No known significant effects or critical hazards.
	CS208212	Harmful if swallowed.
	CS208164	No known significant effects or critical hazards.



## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.  
**Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.  
**Potential delayed effects** : No known significant effects or critical hazards.

#### Potential chronic health effects

- General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
CS208212 Oral	623 mg/kg
CS208164 Oral	33366.7 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
CS202124 Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.4 mg/L Fresh water	Crustaceans - Simocephalus serrulatus - Larvae	48 hours
	Acute EC50 4.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 µg/L Marine water	Algae - Macrocyctis pyrifera	96 hours

### Persistence and degradability

There is no data available.

### Bioaccumulative potential



## Section 12. Ecological information

There is no data available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. No specific disposal consideration.

## Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-
<b>Packing group</b>	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.

**AERG** : Not applicable.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** Not determined.  
**TSCA 12(b) one-time export:** None of the components are listed.  
**TSCA 12(b) annual export notification:** None of the components are listed.  
**Clean Water Act (CWA) 307:** None of the components are listed.  
**Clean Water Act (CWA) 311:** None of the components are listed.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed



## Section 15. Regulatory information

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

Name	EHS	SARA 302 TPQ		SARA 304 RQ	
		(lbs)	(gallons)	(lbs)	(gallons)
<b>CS202124</b> Sodium Azide	Yes.	500	-	1000	-
<b>CS208164</b> Sodium Azide	Yes.	500	-	1000	-

**SARA 304 RQ** : 3715347.2 lbs / 1686767.6 kg

### SARA 311/312

**Classification** : ACUTE TOXICITY (oral) - Category 4

#### Composition/information on ingredients

Name	Classification
<b>CS208212</b> Chloroquine bis(phosphate)	ACUTE TOXICITY (oral) - Category 4
<b>CS208164</b> Albumins, Blood Serum	ACUTE TOXICITY (oral) - Category 4

### SARA 313

There is no data available.

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### Canadian lists

**Canada inventory (DSL NDSL)** : Not determined.

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Not listed.		



## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
<b>CS202124</b> AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method Calculation method
<b>CS208212</b> ACUTE TOXICITY (oral) - Category 4	Calculation method

### History

<b>Date of issue mm/dd/yyyy</b>	: 08/15/2019
<b>Date of previous issue</b>	: Not applicable
<b>Version</b>	: 1
<b>Prepared by</b>	: KMK Regulatory Services Inc.
<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

### 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 subsidiaries, 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.

