

## Kit Summary

**Product Code(s)** AB193662  
**Product name** Human RTK Phosphorylation Antibody Array -Membrane (71 Targets)

### Phosphatase Inhibitor Cocktail Set II

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Disodium tartrate	-	6106-24-7	60	Acute Tox. 4 (H302)	-
Sodium molybdate	231-551-7	7631-95-0	16	-	-
Sodium orthovanadate	237-287-9	13721-39-6	13	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)	-
Imidazole	206-019-2	288-32-4	10	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Repr. 2 (H361)	-
Sodium fluoride	231-667-8	7681-49-4	3	Acute Tox. 3 (H301) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) (EUH032)	-

### Protease Inhibitor Cocktail

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
AEBSF hydrochloride	-	30827-99-7	99	Skin Corr. 1B (H314)	-
Aprotinin	-	9087-70-1	0.8	Resp. Sens. 1 (H334) Skin Sens. 1 (H317)	-
Leupeptin	-	55123-66-5	0.4	Muta. 2 (H341) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)	-
N-(trans-epoxysuccinyl)-L-leucine 4-guanidinobutylamide	-	66701-25-5	0.3	STOT SE 2 (H371)	-
EDTA	200-449-4	60-00-4	0.15	Eye Irrit. 2 (H319)	-

### 2X Cell Lysis Buffer

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium deoxycholate	206-132-7	302-95-4	5	Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)	-
Triton-X-100	-	9002-93-1	2	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)	-

### GHS / CLP - GHS - Classification



### Signal Word

Danger

### Hazard statements

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H360 - May damage fertility or the unborn child

H302 - Harmful if swallowed

H332 - Harmful if inhaled

### Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P281 - Use personal protective equipment as required

P280 - Wear protective gloves/ eye protection/ face protection

P271 - Use only outdoors or in a well-ventilated area

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P270 - Do not eat, drink or smoke when using this product

P264 - Wash face, hands and any exposed skin thoroughly after handling

P361 - Remove/ Take off immediately all contaminated clothing

P363 - Wash contaminated clothing before reuse

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P391 - Collect spillage

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

### 2.3 Other information

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

### TRANSPORT INFORMATION

<b>DOT</b>	Excepted Quantity
<b>Proper shipping name</b>	Chemical kit
<b>Hazard class</b>	9.0
<b>UN/ID No</b>	UN3316
<b>Packing group</b>	II

<b>IATA</b>	Excepted Quantity
<b>UN/ID No</b>	UN3316
<b>Proper shipping name</b>	Chemical kit
<b>Hazard class</b>	9.0
<b>Packing group</b>	II

<b>ADR</b>	Excepted Quantity
<b>Proper shipping name</b>	Chemical kit
<b>Hazard class</b>	9.0
<b>UN/ID No</b>	UN3316

**Packing group**

**II**

# Safety Data Sheet

Issuing date No data available

Revision Date 25-Sep-2019

Version 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Phosphatase Inhibitor Cocktail Set II

**UN/ID No** UN3263

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 3
Acute inhalation toxicity - dust/mist	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 1B

### GHS Label elements, including precautionary statements



**Signal Word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H360 - May damage fertility or the unborn child

H302 - Harmful if swallowed

H332 - Harmful if inhaled

**Precautionary Statements - EU (§28, 1272/2008)**

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P281 - Use personal protective equipment as required

P280 - Wear protective gloves/ eye protection/ face protection

P271 - Use only outdoors or in a well-ventilated area

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P270 - Do not eat, drink or smoke when using this product

P264 - Wash face, hands and any exposed skin thoroughly after handling

P361 - Remove/ Take off immediately all contaminated clothing

P363 - Wash contaminated clothing before reuse

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Disodium tartrate	6106-24-7	40-70	Acute Tox. 4 (H302)
Sodium molybdate	7631-95-0	10-<20	-
Sodium orthovanadate	13721-39-6	10-<20	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)
Imidazole	288-32-4	7-13	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Repr. 2 (H361)
Sodium fluoride	7681-49-4	1-5	Acute Tox. 3 (H301) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) (EUH032)

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

### 4. FIRST AID MEASURES

<b>General advice</b>	When symptoms persist or in all cases of doubt seek medical advice. If symptoms persist, call a physician. Immediate medical attention is required.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Immediate medical attention is required.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician. Do NOT induce vomiting. Immediate medical attention is required.
<b>Notes to physician</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
<b>Protection of first-aiders</b>	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Explosion Data

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<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.
<b>Other information</b>	Refer to protective measures listed in sections 7 and 8.

## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
<b>Technical measures/Storage conditions</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium molybdate 7631-95-0	TWA: 0.5 mg/m <sup>3</sup> Mo respirable fraction	TWA: 5 mg/m <sup>3</sup> Mo (vacated) TWA: 5 mg/m <sup>3</sup> Mo	IDLH: 1000 mg/m <sup>3</sup> Mo
Sodium orthovanadate 13721-39-6			Ceiling: 0.05 mg/m <sup>3</sup> V dust and fume 15 min
Sodium fluoride 7681-49-4	TWA: 2.5 mg/m <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F (vacated) TWA: 2.5 mg/m <sup>3</sup>	IDLH: 250 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> F

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Engineering measures**  
Showers  
Eyewash stations  
Ventilation systems

**Personal protective equipment**

**Eye/face protection** Tightly fitting safety goggles. Face-shield.  
**Skin and body protection** Long sleeved clothing. Protective gloves.  
**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Solid
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available		
<b>Explosion limits</b>	No information available	<b>solubility</b>	No information available.
<b>Specific Gravity</b>	No data available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Evaporation rate</b>	No information available	<b>VOC Content(%)</b>	Not applicable
<b>Vapor density</b>	No data available		



## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	Incompatible with strong acids and bases. Incompatible with oxidizing agents.
<b>Conditions to avoid</b>	Exposure to air or moisture over prolonged periods.
<b>Hazardous decomposition products</b>	Thermal decomposition can lead to release of irritating gases and vapors.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Harmful if swallowed Harmful by inhalation Corrosive to skin, eyes and/or respiratory tract.
<b>Inhalation</b>	Harmful by inhalation
<b>Eye contact</b>	Avoid contact with eyes Causes burns Corrosive to eyes
<b>Skin contact</b>	Wash thoroughly after handling Corrosive Causes burns
<b>Ingestion</b>	Harmful if swallowed

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium molybdate	4 g/kg ( Rat )		2080 mg/m <sup>3</sup> ( Rat ) 4 h
Sodium orthovanadate	330 mg/kg ( Rat )		
Sodium fluoride	52 mg/kg ( Rat )	175 mg/kg ( Rat )	

### Chronic toxicity

<b>Chronic toxicity</b>	Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen Avoid repeated exposure Possible risks of irreversible effects
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<b>carcinogenicity</b>	There are no known carcinogenic chemicals in this product
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Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium molybdate	A3			
Sodium fluoride		Group 3		

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

A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 3 - Not Classifiable as to Carcinogenicity in Humans

<b>Reproductive toxicity</b>	Product is or contains a chemical which is a known or suspected reproductive hazard
<b>Developmental Toxicity</b>	Contains ingredients that have suspected developmental hazards Possible risk of harm to the unborn child May cause birth defects
<b>Target Organ Effects</b>	Blood. Central nervous system (CNS). Eyes. Kidney. Respiratory system. skeletal system.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium fluoride	272: 96 h Pseudokirchneriella subcapitata mg/L EC50 850: 72 h Desmodesmus subspicatus mg/L EC50 static	530: 96 h Lepomis macrochirus mg/L LC50 830: 96 h Lepomis macrochirus mg/L LC50 semi-static 38-68: 96 h Oncorhynchus mykiss mg/L LC50 static 180: 96 h Pimephales promelas mg/L LC50 semi-static		338: 48 h Daphnia magna mg/L EC50 98: 48 h Daphnia magna mg/L EC50 Static
<b>Chemical Name</b>		<b>log Pow</b>		
Imidazole		-0.02		

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging** Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Sodium molybdate	Toxic
Sodium fluoride	Toxic

**14. TRANSPORT INFORMATION**

**DOT** Excepted Quantity  
**Proper shipping name** Corrosive solid, basic, organic, n.o.s. (Imidazole)  
**Hazard class** 8.0  
**UN/ID No** UN3263  
**Packing group** II

**IATA** Excepted Quantity  
**UN/ID No** UN3263  
**Proper shipping name** Corrosive solid, basic, organic, n.o.s. (Imidazole)  
**Hazard class** 8.0  
**Packing group** II

**ADR** Excepted Quantity  
**Proper shipping name** Corrosive solid, basic, organic, n.o.s. (Imidazole)  
**Hazard class** 8.0  
**UN/ID No** UN3263  
**Packing group** II

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Sodium orthovanadate	13721-39-6	13	1.0

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	yes
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium fluoride	1000 lb			X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium fluoride	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium fluoride	X	X	X		X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure limits
Sodium molybdate		Mexico: TWA 5 mg/m <sup>3</sup> Mexico: STEL 10 mg/m <sup>3</sup>

**WHMIS Note:**

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.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H301 - Toxic if swallowed H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled H314 - Causes severe skin burns and eye damage H315 - Causes skin irritation H319 - Causes serious eye irritation H361 - Suspected of damaging fertility or the unborn child if inhaled

**Hazard statements**

H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H360 - May damage fertility or the unborn child  
H302 - Harmful if swallowed  
H332 - Harmful if inhaled

**Revision Date** 25-Sep-2019

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 25-Sep-2019

Version 11

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Protease Inhibitor Cocktail

**UN/ID No** UN3261

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### GHS Label elements, including precautionary statements



**Signal Word**  
Danger

### Hazard statements

H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage

**Precautionary Statements - EU (§28, 1272/2008)**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/ eye protection/ face protection

P264 - Wash face, hands and any exposed skin thoroughly after handling

P363 - Wash contaminated clothing before reuse

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor/ physician

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
AEBSF hydrochloride	30827-99-7	60-99	Skin Corr. 1B (H314)
Aprotinin	9087-70-1	0.1-1	Resp. Sens. 1 (H334) Skin Sens. 1 (H317)
Leupeptin	55123-66-5	0.1-1	Muta. 2 (H341) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)
N-(trans-epoxysuccinyl)-L leucine 4-guanidinobutylamide	66701-25-5	0.1-1	STOT SE 2 (H371)
EDTA	60-00-4	0.1-1	Eye Irrit. 2 (H319)

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

#### 4. FIRST AID MEASURES

<b>General advice</b>	Immediate medical attention is required.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Inhalation</b>	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Immediate medical attention is required.
<b>Notes to physician</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
<b>Protection of first-aiders</b>	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid dust formation. Dam up. After cleaning, flush away traces with water.
<b>Other information</b>	Refer to protective measures listed in sections 7 and 8.

**7. HANDLING AND STORAGE**

<b>Advice on safe handling</b>	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
<b>Technical measures/Storage conditions</b>	Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering measures</b>	Showers Eyewash stations Ventilation systems
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	Tightly fitting safety goggles. Face-shield.
<b>Skin and body protection</b>	Long sleeved clothing. Protective gloves.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Solid
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	Not applicable
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		



## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	Incompatible with strong acids and bases. Incompatible with oxidizing agents.
<b>Conditions to avoid</b>	Exposure to air or moisture over prolonged periods.
<b>Hazardous decomposition products</b>	Thermal decomposition can lead to release of irritating gases and vapors.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Corrosive to skin, eyes and/or respiratory tract. Irritating to skin, eyes and / or respiratory tract.
<b>Inhalation</b>	May cause irritation May cause irritation of respiratory tract
<b>Eye contact</b>	Causes burns Corrosive to eyes May cause irritation
<b>Skin contact</b>	Corrosive Causes burns
<b>Ingestion</b>	Causes burns Ingestion may cause irritation to mucous membranes

### Chronic toxicity

<b>Chronic toxicity</b>	Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen Avoid repeated exposure Possible risks of irreversible effects
<b>Target Organ Effects</b>	None known.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste disposal methods</b>	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.
<b>Contaminated packaging</b>	Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

**DOT** Excepted Quantity  
**Proper shipping name** Corrosive solid, acidic, organic, n.o.s.(AEBSF)  
**Hazard class** 8.0  
**UN/ID No** UN3261  
**Packing group** II

**IATA** Excepted Quantity  
**UN/ID No** UN3261  
**Proper shipping name** Corrosive solid, acidic, organic, n.o.s.(AEBSF)  
**Hazard class** 8.0  
**Packing group** II

**ADR** Excepted Quantity  
**Proper shipping name** Corrosive solid, acidic, organic, n.o.s.(AEBSF)  
**Hazard class** 8.0  
**UN/ID No** UN3261  
**Packing group** II

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** yes  
**Chronic Health Hazard** yes  
**Fire Hazard** no  
**Sudden Release of Pressure Hazard** no  
**Reactive Hazard** no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
EDTA	5000 lb			X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
EDTA	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
EDTA	X	X	X		

**International Regulations**

**WHMIS Note:**

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.

**16. OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3**

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled H314 - Causes severe skin burns and eye damage  
 H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H341 - Suspected of causing genetic defects H371 - May cause damage to organs

**Hazard statements**

H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage

**Revision Date** 25-Sep-2019

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 25-Sep-2019

Version 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** 2X Cell Lysis Buffer

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Serious eye damage/eye irritation	Category 2
Chronic aquatic toxicity	Category 3

### GHS Label elements, including precautionary statements



### Signal Word

Warning

### Hazard statements

H319 - Causes serious eye irritation  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/ 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. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P273 - Avoid release to the environment

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Sodium deoxycholate	302-95-4	3-7	Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)
Triton-X-100	9002-93-1	1-5	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)

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

**4. FIRST AID MEASURES**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.  
**Sensitivity to Static Discharge** None.

**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 to prevent contact with skin and eyes.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions** Ensure adequate ventilation.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Try to prevent the material from entering drains or water courses.

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**7. HANDLING AND STORAGE**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Technical measures/Storage conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering measures** Showers  
 Eyewash stations  
 Ventilation systems

**Personal protective equipment**

**Eye/face protection** Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection** Long sleeved clothing. Protective gloves.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available		
<b>Flash point</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Melting point/range</b>	No information available		
		<b>Flammability Limits in Air</b>	No information available
<b>Explosion limits</b>	No information available		
		<b>solubility</b>	No information available.
<b>Specific Gravity</b>	No data available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Evaporation rate</b>	No information available	<b>VOC Content(%)</b>	Not applicable
<b>Vapor density</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Irritating to eyes
<b>Eye contact</b>	Irritating to eyes

### Chronic toxicity

<b>Target Organ Effects</b>	None known.
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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging** Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

**International Regulations**

**WHMIS Note:**

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.



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**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed H412 - Harmful to aquatic life with long lasting effects H315 - Causes skin irritation H318 - Causes serious eye damage H411 - Toxic to aquatic life with long lasting effects

**Hazard statements**

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

**Revision Date** 25-Sep-2019

**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of MSDS**