

Kit Summary

Product Code(s) AB239704
Product name Mitochondrial Permeability Transition Pore Assay Kit

CoCl2

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Cobalt chloride	231-589-4	7646-79-9	2	Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350i) Repr. 1B (H360F) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	

Ionomycin

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
DMSO	200-664-3	67-68-5	95	-	-

GHS / CLP - GHS - Classification



Signal Word
Danger

Hazard statements

H350 - May cause cancer
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341 - Suspected of causing genetic defects
H360 - May damage fertility or the unborn child
H317 - May cause an allergic skin reaction
H411 - Toxic to aquatic life with long lasting effects

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

P280 - Wear protective gloves/ eye protection/ face protection

P281 - Use personal protective equipment as required

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P285 - In case of inadequate ventilation wear respiratory protection

P363 - Wash contaminated clothing before reuse

P272 - Contaminated work clothing should not be allowed out of the workplace

P308 + P313 - IF exposed or concerned: Get medical advice/ attention

P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

P273 - Avoid release to the environment

P391 - Collect spillage

P405 - Store locked up

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

2.3 Other information

Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body

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

TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

Safety Data Sheet

Issuing date No data available

Revision Date 17-Oct-2018

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	CoCl ₂
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	Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Chronic aquatic toxicity	Category 2

GHS Label elements, including precautionary statements



Signal Word

Danger

Hazard statements

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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
 P280 - Wear protective gloves/ eye protection/ face protection
 P281 - Use personal protective equipment as required
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
 P285 - In case of inadequate ventilation wear respiratory protection
 P363 - Wash contaminated clothing before reuse
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention
 P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
 P273 - Avoid release to the environment
 P391 - Collect spillage
 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)
Cobalt chloride	7646-79-9	1-5	Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350i) Repr. 1B (H360F) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

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

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. If symptoms persist, call a physician.
Inhalation	Move to fresh air. Artificial respiration and/or oxygen may be necessary. If symptoms persist, call a physician.
Ingestion	Clean mouth with water. Drink plenty of water.
Notes to physician	May cause sensitization of susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	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.
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization by inhalation and skin contact
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	Use personal protective equipment. Keep people away from and upwind of spill/leak.
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. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up	Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Do not breathe vapors or spray mist.
Technical measures/Storage conditions	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, 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.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Cobalt chloride 7646-79-9	TWA: 0.02 mg/m ³ Co		

Engineering measures
Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles.

Skin and body protection

No special protective equipment required.

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. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

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

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information May cause sensitization of susceptible persons

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt chloride	80 mg/kg (Rat)		

Chronic toxicity

Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons Avoid repeated exposure

carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Chemical Name	ACGIH	IARC	NTP	OSHA
Cobalt chloride	A3	Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

OSHA: (Occupational Safety & Health Administration)

X - Present

Sensitization As a precaution the product should be treated as a sensitizer.

Mutagenic effects Possible risks of irreversible effects.

Reproductive toxicity Product is or contains a chemical which is a known or suspected reproductive hazard

Developmental Toxicity Contains ingredients that have suspected developmental hazards Possible risk of harm to the unborn child May cause birth defects

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations.

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
Cobalt chloride	Toxic

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 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 %
Cobalt chloride	7646-79-9	2	0.1

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).

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

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Cobalt chloride			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**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H317 - May cause an allergic skin reaction H341 - Suspected of causing genetic defects if inhaled H350i - May cause cancer by inhalation H360F - May damage fertility H302 - Harmful if swallowed H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H350 - May cause cancer

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H341 - Suspected of causing genetic defects

H360 - May damage fertility or the unborn child

H317 - May cause an allergic skin reaction

H411 - Toxic to aquatic life with long lasting effects

Revision Date 17-Oct-2018

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 17-Oct-2018

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Ionomycin
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 Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

Ozone	Not applicable
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GHS Label elements, including precautionary statements

Not dangerous

Other information

Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
DMSO	67-68-5	60-99	-

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

4. FIRST AID MEASURES

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water. Drink plenty of water.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	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	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	No special protective equipment required.
Skin and body protection	No special protective equipment required.
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

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	99
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
DMSO	14500 mg/kg (Rat)	40 g/kg (Rat)	

Chronic toxicity

Target Organ Effects None known.

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
DMSO	12350 - 25500: 96 h Skeletonema costatum mg/L EC50	34: 96 h Pimephales promelas mg/L LC50 33-37: 96 h Oncorhynchus mykiss g/L LC50 static 40: 96 h Lepomis macrochirus g/L LC50 static 41.7: 96 h Cyprinus carpio g/L LC50		7000: 24 h Daphnia species mg/L EC50
Chemical Name			log Pow	
DMSO			-2.03	

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

Acute Health Hazard	no
Chronic Health Hazard	no
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).

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

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
DMSO		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

Revision Date 17-Oct-2018
Revision Note No information available.

Disclaimer

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End of MSDS