

Kit Summary

Product Code(s) AB239705
Product name Dihydrofolate Reductase Assay Kit (Colorimetric)

DHFR Substrate

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Beta mercaptoethanol	200-464-6	60-24-2	25	Skin Corr. 1A (H314) Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Aquatic Chronic 2 (H411)	

GHS / CLP - GHS - Classification



Signal Word
Danger

Hazard statements

H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H373 - May cause damage to organs through prolonged or repeated exposure
H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects

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

P280 - Wear protective gloves/ eye protection/ face protection

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

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

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

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

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

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

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 16-Oct-2018

Version 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product name DHFR Substrate

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

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 3
Acute inhalation toxicity - vapor	Category 2
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ systemic toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 2

GHS Label elements, including precautionary statements



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Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Beta mercaptoethanol	60-24-2	10-30	Skin Corr. 1A (H314) Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Aquatic Chronic 2 (H411)

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

4. FIRST AID MEASURES

General advice	When symptoms persist or in all cases of doubt seek medical advice. If symptoms persist, call a physician. Immediate medical attention is required.
Eye contact	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.
Skin contact	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.
Inhalation	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.
Ingestion	Rinse mouth. If symptoms persist, call a physician. Do NOT induce vomiting. Immediate medical attention is required.
Notes to physician	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.
Protection of first-aiders	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

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	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
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. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. 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	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.
Other information	Refer to protective measures listed in sections 7 and 8.

7. HANDLING AND STORAGE

Advice on safe handling	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.
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 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.
Engineering measures	Showers Eyewash stations Ventilation systems
Personal protective equipment	
Eye/face protection	Tightly fitting safety goggles. Face-shield.
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. 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

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		
Explosion limits	No information available		
Specific Gravity	No data available	solubility	No information available.
Evaporation rate	No information available	Vapor Pressure @20°C (kPa)	No information available
Vapor density	No data available	VOC Content(%)	Not applicable

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

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

Chronic toxicity

Chronic toxicity	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
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Chemical Name	log Pow
Beta mercaptoethanol	-0.056

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations.

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	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
Beta mercaptoethanol	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**

H314 - Causes severe skin burns and eye damage H302 - Harmful if swallowed H311 - Toxic in contact with skin H332 - Harmful if inhaled H411 - Toxic to aquatic life with long lasting effects

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Revision Date 16-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