

Safety Data Sheet

UvsX

Version number: 2.3

Date: 21 November 2018

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This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is provided on a voluntary basis and follows the formatting described in the REACH Regulation (EC) No 1907/2006 and the CLP Regulation (EC) No 1272/2008.

Section 1: Identification of the substance/mixture and of the company/undertaking

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- 1.1 Product identifier
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- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Laboratory reagent
- 1.3 Details of the supplier of the safety data sheet
TwistDx Ltd
Abbott House
Vanwall Business Park
Vanwall Road
Maidenhead SL6 4XE
United Kingdom
Telephone: +1-877-450-6901
E-mail: info@twistdx.co.uk
- 1.4 Emergency telephone number
In case of emergency Tel. +1-703-741-5970 (+1-800-424-9300 for US, Canada)

Section 2: Hazards Identification

- 2.1 Classification of the substance or mixture
Not classified as hazardous according to the CLP Regulation (EC) No 1272/2008.
- 2.2 Label elements
No label required according to the CLP Regulation (EC) No 1272/2008.
- 2.3 Other hazards
No special hazards.

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Section 3: Composition

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3.1 Substances

Not applicable, the product is a mixture

3.2 Mixtures

Name	CAS No, EC No, Registration No (if available)	Concentration	Classification
Tris	77-86-1 201-064-4	< 1%	Not classified as hazardous
Sodium chloride	231-598-3 7647-14-5	< 1%	Not classified as hazardous
Dithiothreitol	3483-12-3 222-468-7	< 1%	Acute tox 4H302 Skin Irrit 2 H315 Eye irrit 2 H319 STOT SE 3 H335
Ethylenediaminetetraacetic acid	64-02-8 200-573-9	< 1%	Acute Tox 4 H302 Eye Dam. 1 H318 Acute Tox 4 H332 STOT RE 2 H373 (Respiratory tract, inhalation)
2-Mercaptoethanol	60-24-2 200-464-6	<0.0001%	Acute Tox. 3 H301 Acute Tox. 2 H310 Skin Irrit. 2 H315 Skin Sens. 1A H317 Eye Dam. 1 H318 Acute Tox. 3 H331 STOT RE 2 H373 (liver, heart) Aquatic Chronic 1 H410 M(Chronic)=1 M=1
Recombinant protein		< 1%	Not classified as hazardous

See section 16 for full description of R phrases and H statements.

Section 4: First Aid Measures

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4.1 Description of first aid measures

EYE CONTACT: Wash thoroughly with water and obtain medical attention if signs of discomfort.

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INHALATION: Remove from exposure. If breathing becomes difficult call a doctor.

SKIN CONTACT: Wash off with soap and water. Seek medical attention if irritation occurs.

INGESTION: If swallowed, rinse mouth with water.

- 4.2 Most important symptoms and effects, both acute and delayed
Prolonged or repeated exposure may cause mild irritation of the skin and eyes. Ingestion may result in nausea and discomfort.
- 4.3 Indication of any immediate medical attention and special treatments needed
Symptomatic treatment as required

Section 5: Firefighting Measures

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- 5.1 Extinguishing media
Not combustible. Use extinguishing media appropriate to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture
No special hazards.
- 5.3 Advice for fire fighters
No special measures required.

Section 6: Accidental Release Measures

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- 6.1 Personal precautions, protective equipment and emergency procedures
Remove unnecessary personnel away from area of spill or contamination. Wear suitable protective clothing including eye protection, gloves and lab coat or coveralls. See section 8 for more information.
- 6.2 Environmental precautions
Prevent entry into drains and watercourses.
- 6.3 Methods and materials for containment and clearing up
Small quantities (<500 mls) may be flushed to drain with plenty of running water. Larger quantities should be absorbed onto a suitable absorbent or paper towels and place in a sealed container for disposal. Wash spill area thoroughly with water and detergent.
- 6.4 References to other sections
See section 8 for further advice on protective equipment and section 13 for advice on disposal.

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Section 7: Handling and Storage

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- 7.1 Precautions for safe handling
Avoid unnecessary skin and eye contact. Wash thoroughly after handling and before eating and drinking.
- 7.2 Conditions for safe storage, including any incompatibilities
Product should be stored at -80°C to maintain efficacy.
- 7.3 Specific end uses(s)
Only for use as a laboratory reagent.

Section 8. Exposure Controls/Personal Protection

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- 8.1 Control parameters
No exposure limits available

- 8.2 Exposure controls

Engineering controls
None usually required.

Respiratory protection
Not normally required.

Hand Protection
Wear suitable chemical resistant gloves. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Eye protection
Wear safety glasses with side protection to prevent splashes to the eye.

Skin protection
Wear suitable protective clothing – lab coat or coveralls. These should be changed after use or if contaminated. Wash before re-use.

Environmental Exposure
Prevent unnecessary releases to the environment.

Section 9: Physical and Chemical Properties

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9.1 Information on basic physical and chemical properties

Appearance:	Clear liquid
Odour:	No odour
Odour threshold:	Not applicable
pH:	8.0
Melting point:	Similar to water
Boiling point:	Similar to water
Flashpoint:	Not flammable
Evaporation rate:	Similar to water
Flammability (gas, solid):	Not applicable
Upper/lower flammability limits:	Not flammable
Vapour pressure:	Similar to water
Vapour density:	Similar to water
Relative density:	Approximately 1.0
Solubility in water:	Soluble
Solubility in other solvents:	No data
Partition coefficient (log Kow):	No data
Autoignition temperature:	Not flammable
Decomposition temperature:	No data
Viscosity:	No data
Explosive properties:	Not classified as explosive
Oxidising properties:	Not classified as oxidising

9.2 Other information

None

Section 10: Stability and Reactivity

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10.1 Reactivity

No reactive hazards known

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Not expected to occur.

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- 10.4 Conditions to avoid
Excessive heat.
- 10.5 Incompatible materials
Strong oxidisers.
- 10.6 Hazardous decomposition products
None known

Section 11: Toxicological Information

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11.1 Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

- | | |
|------------------------------------|---|
| (a) acute toxicity | Not expected to be acutely toxic |
| (b) skin corrosion/irritation | Splashes may be mildly irritating to skin. |
| (c) serious eye damage/irritation | Splashes to the eye may be mildly irritating. |
| (d) respiratory/skin sensitisation | Contains 2-mercaptoethanol at concentration well below the classification threshold, nevertheless already sensitised individuals should avoid skin contact with this product. |
| (e) germ cell mutagenicity | Contains no substances classified for germ cell mutagenicity. |
| (f) carcinogenicity | Contains no known carcinogens |
| (g) reproductive toxicity | Contains no known reproductive toxicants. |
| (h) STOT-single exposure | Contains a substance classified for respiratory irritation, however such effects are unlikely in solution and at the concentration present. |
| (i) STOT-repeated exposure | Contains a substance that may be harmful if inhaled, however, no adverse effects are expected from the concentrations and amounts used in this product. |
| (j) aspiration hazard | Contains no substances known to present an aspiration hazard. |

Section 12: Ecological Information

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This product has not been tested. Judgements on the expected environmental effects of this product have been made based upon consideration of its major components.

12.1 Toxicity

Contains a substance hazardous to aquatic life, but at the concentration present no adverse effects are anticipated from this product

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- 12.2 Persistence and degradability
The organic components are expected to be rapidly biodegraded.
- 12.3 Bioaccumulative potential
None of the components are expected to bioaccumulate
- 12.4 Mobility in soil
All components are soluble
- 12.5 Results of PBT and vPvB assessment
A formal PBT/vPvB assessment has not been carried out, but none of the components are expected to be PBT or vPvB.
- 12.6 Other adverse effects
None known.

Section 13: Disposal Considerations

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- 13.1 Waste treatment methods
Small quantities of this material (< 500 millilitres) may be disposed of by flushing with an excess of water to foul drainage. A dilution factor of at least 100 is recommended. Larger quantities of waste should be disposed of in a manner that complies with local regulations. Advice should be sought from local agencies.

Section 14: Transport Information

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- | | | |
|------|--|-----------------------------|
| 14.1 | UN Number | Not classified as hazardous |
| 14.2 | UN Proper shipping name | Not applicable |
| 14.3 | Transport hazard class(es) | Not applicable |
| 14.4 | Packing group | Not applicable |
| 14.5 | Environmental hazards | Not applicable |
| 14.6 | Special precautions for user | None |
| 14.7 | Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not transported in bulk |

Section 15: Regulatory Information

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- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
All components are listed as existing substances in Europe.

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15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

Section 16: Other Information

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Revision information:

Revised to update to new REACH and CLP formatting requirements.

List of Abbreviations used in this SDS:

CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging Regulation (EC) no 1272/2008
DSD	Dangerous Substances Directive 67/548/EEC
DPD	Dangerous Preparations Directive 1999/45/EC
EC	European Community/Commission
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006
vPvB	very Persistent, very Bioaccumulative

References:

ECHA Classification and Labelling Inventory and Database of Disseminated Registration Dossiers

Method used for classification of mixtures:

Ingredient based approaches

R Phrases and H Statements used in Section 3

Acute Tox. 2 H310	Acute Toxicity Category 2, H310 Fatal in contact with skin
Acute Tox. 3 H301	Acute Toxicity Category 3, H301 Toxic if swallowed
Acute Tox. 3 H331	Acute Toxicity Category 3, H301 Toxic if inhaled
Acute Tox. 4 H302	Acute Toxicity Category 4, H302 Harmful if swallowed.
Acute Tox. 4, H332	Acute Toxicity Category 4, H302 Harmful if inhaled
Aquatic Chronic 1 H410	Chronic Aquatic Toxicity Category 1, H410 Very toxic to aquatic life with long lasting effects
Eye Dam. 1, H318	Eye Damage Category 1, H318 Causes serious eye damage
Eye irrit 2 H319	Eye Irritation Category 2, H319 Causes serious eye irritation
Skin Irrit 2 H315	Skin Irritation Category 2, H315 Causes skin irritation
Skin Sens. 1A H317	Skin Sensitiser Category 1A, H317 May cause an allergic skin reaction
STOT RE 2, H373	Specific Target Organ Toxicity Category 2, H373 May cause damage to organs

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STOT SE 3 H335

Specific Target Organ Toxicity Category 3, H335 May cause respiratory irritation

Training requirements for workers

None