



Section 1 - Product Identification / Manufacturer

Product name	Recombinant Rat Thioredoxin Reductase 1
Catalogue name	RTRXR1-5 (-10, -20, -50)
Cas number	Not applicable
Manufacturer	Selenozyme AB Nanna Svartz väg 2 SE-171 65, Solna Sweden Mail: info@selenozyme.com

Section 2 – Hazards Identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Pictogram	none
Signal word	none
Hazard statement(s)	none
Precautionary	none
Supplemental hazard statements	none

Contains: Recombinant Rat Thioredoxin Reductase 1. May potentially produce an allergic reaction, although there are no known cases of such allergic reaction having occurred.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Section 3 – Composition / Information on Ingredients**

Name of Reagents	Ingredients	Cas #	Concentration
Tris(hydroxymethyl)aminomethane hydrochloride		1185-53-1	50 mM
Ethylenediamine Tetraacetic Acid		60-00-4	2 mM
Glycerol		56-81-5	30% (v/v)

Section 4 – First Aid Measures**4.1 Description of first aid measures****General advice**

The product is not considered to be dangerous but consult a physician if in doubt. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If person is not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. If conscious, drink approximately 2-3 normal drinking glasses of water.

4.2 Most important symptoms and effects, both acute and delayed

No known symptoms and effects have been documented upon exposure, inhalation or ingestion of this product.

4.3 Indication of any immediate medical attention and special treatment needed

No data available



Section 5 – Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

No data available, with little indication for any environmental damage occurring from the product.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as chemical waste.

6.4 Reference to other sections

For disposal see section 13.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities



Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.
Recommended storage temperature -20 ° C.

7.3 Specific end use(s)

Intended use is as a reagent in scientific research. The product must not be used for any other purposes. The product is neither to be ingested nor administrated in any other means to a human or to an animal. No other specific uses are stipulated.

Section 8 –Personal Protection

8.1 Control parameters

Components with workplace control parameters.

8.2 Exposure controls

Handle in accordance with good laboratory hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals must not necessarily be used. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection



Where risk assessment for work involving this product shows that air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9 – Physical and Chemical Properties

a) Appearance Form	Aqueous solution
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	7.5
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

Section 10 – Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable for at least 6 months under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong bases, Bases, Oxidizing agents, Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Acute toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 – Ecological Information



12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Section 13 – Disposal Information

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 – Transport Information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID:

Not dangerous goods



IMDG:	Not dangerous goods	
IATA:	Not dangerous goods	
14.3 Transport hazard class(es)		
ADR/RID: -	IMDG: -	IATA: -
14.4 Packaging group		
ADR/RID: -	IMDG: -	IATA: -
14.5 Environmental hazards		
ADR/RID: no	no IMDG Marine pollutant: no	IATA: no
14.6 Special precautions for user		
No data available		

Section 15 – Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

Section 16 – Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Selenozyme AB shall not be held liable for any damage resulting from handling or from contact with the above product.