

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Version: 1.0/ EN
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Print date: 18.August 2009
Revision date: 23.03.2009

1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/ UNDERTAKING

Product: Horseradish Peroxidase-Biotin
Product number: 152030

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2. HAZARDS IDENTIFICATION

2.1 Classification: not classified

Information pertaining to special dangers for human and environment:

Adverse human health effects and symptoms:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin contact: May be harmful if absorbed through skin. May cause skin irritation.
Eye contact: May cause eye irritation.
Ingestion: May be harmful if swallowed.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Preparation

1. Protein conjugate: The preparation contains a glycoprotein covalently coupled to biotin residues. The conjugate is dissolved in a buffer solution (see 2.).

2. Buffer Solution: The buffer solutions contains phosphate salts and 0,05% sodium azide as a preservative. The pH of the buffer is 7.4.

Chemical name	Substance Preparation	CAS-No.	EC-number	Content	Symbol	R-Set
Horseradish Peroxidase (E.C. 1.11.1.7)		9003-99-0	232-668-6	up to 10%	-	-
sodium azide		26628-22-8	-	< 0,1%	-	-

4. FIRST AID MEASURES

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

In case of ingestion: If swallowed, wash out mouth with water. If large quantities are swallowed, call a physician immediately. Loosen tight clothing.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray, carbon dioxide, dry powder or appropriate foam.

Special protective equipment for fire-fighters: Fire fighters should wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Be sure to wear an approved/ certified respirator or equivalent.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Removal of ignition sources. Provision for sufficient ventilation and respiratory protection.

Methods for cleaning-up: Clean by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

7. HANDLING AND STORAGE

7.1 Handling

Do not lyophilise the conjugated protein. Do not dialyse against water. Avoid repeated freeze-and-thaw cycles.

7.2 Storage

Storage at 2°C - 8°C in the original container.

For long-time storage it is recommended to freeze aliquots at -20°C

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Personal protection:

Respiratory protection:	not required
Handschutzhand protection:	wear gloves
Eye protection:	wear safety glasses
Body protection:	use a lab coat.

Hygiene measures: Wash hands and forearms after handling and before eating, smoking, using lavatory and at the end of the day.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Physical state:	liquid
colour:	clear and colourless

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9.2

pH (20°C)	7.4 +/- 0,02
boiling range (°C)	~ 100°C (water)
density (g/mL)	~ 1
solubility	soluble in buffered solution (pH 5 - 10) dissolving in water or buffer with a pH out of the given range may lead to a precipitation of lectin conjugates

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

Heating (>37°C), a decrease of pH < 5 and increase of pH > 10 may leads to a loss of activity or precipitation.
The components are stable under recommended storage and handling conditions

10.2 Materials to avoid

Strong oxidizing agents

10.3 Hazardous decomposition products

not known

11. TOXICOLOGICAL INFORMATION

Acute effects (toxicity tests):	no data available
Specific symptoms an animal studies:	no data available
Irritant and corrosive effects:	no data available
Irritation to respiratory tract:	no data available
Sensitization:	May cause allergic reaction.
In case of skin contact:	May cause sensitization by skin contact.
In case of inhalation:	May cause sensitization of the mucous membranes and upper respiratory tract.
Signs and symptoms of exposure:	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	no data available
Mobility:	no data available
Persistence and degradability:	no data available
Biodegradation:	The products of degradation are less toxic than the product itself.

13. DISPOSAL CONSIDERATIONS

Appropriate disposal/ Product: Waste must be disposed in accordance with federal, state and local regulations.
Contact a licensed disposal service to dispose of this material.

14. TRANSPORT INFORMATION

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Land transport (ADR/ RID/ GGVSE):	Non-hazardous for road transport.
Sea transport (IMDG-Code/ GGVSee):	Non-hazardous for sea transport.
Air transport (ICAO-IATA/ DGR):	Non-hazardous for air transport.

15. REGULATORY INFORMATION

EU-Regulations:

Chemical name:	Sodium azide (<u>$\geq 0,1 \%$</u>)
Indication of danger:	T ⁺ , N
Classification:	Very toxic ($> 0,1\%$), Dangerous for the environment
R-Phrases:	R 28, 32, 50/53 Very toxic if swallowed.

Contact with acids liberates very toxic gas.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-Phrases: S 28, 45, 60, 61

After contact with skin, wash immediately with plenty of soapy water.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment. Refer to special instructions/ Safety data sheets.

16 OTHER INFORMATION

Disclaimer: The information herein is believed to be accurate but it is the responsibility of the user to determine the applicability of these data to the formulation of necessary safety precautions. GALAB Technologies GmbH makes no representation, warranty or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information. The information does not purport to be all inclusive and shall be used only as a guide. GALAB shall not be held liable for any damage resulting from handling or from contact with any damage resulting from handling or from contact with the above product.
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