

Material Safety Data Sheet

According to EG 1907/2006, article 31

Version: 03, Revision Date: 15.01.19

For Product:



Aggrecanase Activity Assay

Order number: 30 510 111

1. Product and Company Identification

Product Information:

- **Product Name:** Aggrecanase Activity Assay
- **Product Code:** 30 510 111
- **Use of the material / preparation:**
Laboratory reagent / Immunoassay

The product is intended for the professional user.

Manufacturer / Supplier:

BioTeZ Berlin-Buch GmbH
Robert-Rössle-Str. 10
D-13125 Berlin
Tel.: +49-30-9489 2130
Fax.: +49-30-9494 509
E-Mail: info@biotez.de
http: //www.biotez.de

Further Information provider: Safety Personnel

Emergency contact: +49-30-9489 2130

2. Potential Hazards

The product contains the hazardous components:

1. Stop solution with <10% sulfuric acid
2. Detection solution TMB with <5% N-Methyl-2-pyrrolidone
3. Antibody-Peroxidase Conjugate with <5% Phenol

The kit contains the following components.

| Component | Description | Volume | Safety information |
|--------------------------------------|-------------------------|----------------------|--------------------|
| <i>microtiter plate</i> | <i>Polystyrol plate</i> | <i>8 x 12 strips</i> | <i>No hazards</i> |
| <i>ELISA Buffer</i> | <i>liquid</i> | <i>1x 25 ml</i> | <i>No hazards</i> |
| <i>ARGSVIL-Peptide-s Standard</i> | <i>liquid</i> | <i>300 µl</i> | <i>No hazards</i> |
| <i>Wash Buffer</i> | <i>liquid</i> | <i>1 x 25 ml</i> | <i>No hazards</i> |
| <i>Detection Solution TMB</i> | <i>liquid</i> | <i>1 x 12 ml</i> | hazardous |
| <i>Stop solution</i> | <i>liquid</i> | <i>1 x 12 ml</i> | hazardous |
| <i>Aggrecan-IGD</i> | <i>liquid</i> | <i>500 µl</i> | <i>No hazards</i> |
| <i>ADAMTS4-Standard</i> | <i>liquid</i> | <i>50 µl</i> | <i>No hazards</i> |
| <i>Inhibitor Solution</i> | <i>liquid</i> | <i>500 µl</i> | <i>No hazards</i> |
| <i>Reaction Buffer</i> | <i>liquid</i> | <i>1 x 12 ml</i> | <i>No hazards</i> |
| <i>EDTA Dilution Buffer</i> | <i>liquid</i> | <i>1 x 12 ml</i> | <i>No hazards</i> |
| <i>Antibody-Peroxidase Conjugate</i> | <i>liquid</i> | <i>200 µl</i> | hazardous |

Dangerous components:

1. Stop solution

The product contains **0,25 M sulfuric acid**

REACH-Register-No.: 01-2119472430-46-XXXX
 EINECS: 231-639-5
 CAS: 7664-93

• **Classification system according Regulation (EC) No.1272/2008 (CLP):**

| | |
|-----------------------|--------------------------------------|
| GHS05 Corrosivity | |
| Corrosive to metals 1 | H290: May be corrosive to metals. |
| Irritation of skin 2 | H315: Causes skin irritation. |
| Irritation of eyes 2 | H319: Causes serious eye irritation. |

• **Labelling according to Regulation (EC) No.1272/2008:**

Stop solution with hazard pictogram:



GHS05 Signal word: Warning

Hazard Statement(s):

H290: May be corrosive to metals.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.

Precautionary statement(s):

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P337+P313: Get medical advice/attention.

P302+P352

IF ON SKIN: Wash with soap and water.

2. Detection Solution TMB

This product is a mixture. The Product contains <5% N-Methyl-2-pyrrolidone.

REACH-Register-No.: 01-2119472430-46-XXXX

EINECS: 212-828-1

CAS: 872-50-4

- **Classification system according Regulation (EC) No.1272/2008 (CLP), modified by EC 2016/1179:**

GHS08 Reproductive toxicity Repr. 1B

H360: May damage the unborn child.

- **Labelling according to Regulation (EC) No.1272/2008:**

Detection Solution TMB with hazard pictogram:



GHS08 Signal word: Danger!

Hazard Statement(s):

H360D: May damage the unborn child.

Precautionary statement(s):

P280: Wear protective gloves/protective clothing/eye protection/face protection.

3. Antibody-Peroxidase Conjugate

This product is a mixture. The Product contains <5% Phenol

REACH-Register-No.: 01-2119471329-32-XXXX

EINECS: 203-632-7

CAS: 108-95-2

- **Classification system according Regulation (EC) No.1272/2008 (CLP), modified by EC 2016/1179:**

H301 Acute toxicity, Oral (Category 3)

H331 Acute toxicity, Inhalation (Category 3)

H311 Acute toxicity, Dermal (Category 3)

H314 Skin corrosion (Category 1B)
H318 Serious eye damage (Category 1)
H341 Germ cell mutagenicity (Category 2)
H373 Specific target organ toxicity-repeated exposure (Category 2)
H411 Chronic aquatic toxicity (Category 2)

• **Labelling according to Regulation (EC) No.1272/2008:**

Antibody-Peroxidase Conjugate with hazard pictogram:



GHS08 Signal word: Danger!

Hazard Statement(s):

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 + P310

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

3. Composition / Information on ingredients

Chemical characterization (Preparation)

All liquid components are mixtures.








• **Description:**

Detection Solution TMB contains N-Methyl-2-pyrrolidone.

Stop solution contains sulphuric acid.

Antibody-Peroxidase Conjugate contains Phenol.

• **Hazardous Substances:**

| Registry Number CAS and EINECS | Chemical name (pure ingredients) | Hazard symbol/ Hazard statements (*) | Quantity in components |
|-------------------------------------|--------------------------------------|---|---------------------------------------|
| CAS: 7664-93-9 EINECS: 231-639-5 | Sulfuric acid |  Danger, Corrosive to metals 1; H290 Irritation of skin 2 ; H315, Irritation of eye 2; H319 | < 0,25 M in Stop solution |
| CAS: 872-50-4 EINECS: 212-828-1 | N-Methyl-2- pyrrolidone |   Danger! H315-319-335-H360D | < 5% in TMB substrate |
| CAS: 108-95-2 EINECS: 203-632-7 | Phenol |     Danger! H301-331-311-314-318-341- 373-411 | <0,5% in Antibody POD-conjugate |

(*): according to EC regulation No 1272/2008

• **Additional Information:**

For the wording of the listed risk phrases, refer to section 16.

4. First-aid measures

- **General information:** Consult a physician. Show this safety data sheet to the doctor in attendance.
- **After inhalation:** Supply fresh air, consult a physician.
- **After skin contact:** Rinse with water, consult a physician. Caution with *Stop solution* (classified as skin irritant).
- **After eye contact:** Rinse the eyes with open eye lids for several minutes under running water, consult a physician.
- **After ingestion:** Seek immediate medical attention. DO NOT induce vomiting.

5. Fire fighting measures

- **Suitable extinguishing agents:**
 CO₂, extinguishing powder or water spray. Major fires should be fought with water spray or alcohol resistant foam.
- **Protective equipment:** Wear breath protective mask and protective clothes if necessary during fire fighting.

6. Accidental release measures

- **Personal safety precautions:** Use personal protective equipment. Avoid breathing vapor.
- **Environmental protection:** Avoid contamination of water or soil.
- **Measures for cleaning / collecting:** Absorb with absorbent material and dispose as hazardous waste.

7. Handling and Storage

Handling:

- **Information on safe handling:** No special measures required.
- **Precautions against fire and explosion:** No special measures required.

Storage:

- **Requirements for storage rooms and containers:** No special requirements.
- **Common Storage:** Keep away from food. Protect from unauthorized access.
- **Further information on storage conditions:**
Keep container tightly closed. Keep container in a cool, well ventilated area. Protect from heat and direct sunlight. Information on storage and stability of prepared reagents is stated in the relevant chapters of the manual.
- **Storage class:** 8B for Stop solution, 12 (non flammable liquids) for TMB substrate
- **General Classification Guideline for Preparations of the EC:** no special requirements

8. Exposure controls and personal protective equipment

- **Components with critical values that require monitoring at the workplace:**
The product contains no relevant quantities of materials with critical values that require monitoring at the workplace.

Consider the usual good hygiene and safety practice by handling chemicals.
Pregnant women strictly avoid inhalation or skin contact.

Personal protective equipment:

- **General protective and hygiene measures:**
The usual precautions for handling chemicals are observed.
- **Respiratory protection:** Not required.
- **Protection of hands:** Protective gloves.
- **Glove material:** Chemical protective gloves should be selected according to the requirements of workplaces. The glove material has to be impermeable and resistant. Note the details about the product/ substance / preparation.
- **Eye protection:** Safety glasses are recommended.
- **Body protection:** Lab coat

9. Physical and chemical properties:

General information:

- **Form:** Liquids
- **Colour:** Varied
- **Odor:** Odorless

Change in condition:

- **Melting point / Melting range:** Not determined.
- **Boiling point / Boiling range:** Not determined.
- **Flash Point:** Not applicable.
- **Self-igniting:** Product is not explosive.
- **Danger of explosion:** Product is not explosive.
- **Density:** Not determined.
- **Solubility in / Miscibility with water:** Miscible.

10. Stability and reactivity:

- **Stability and Reactivity:** The products are stable under normal handling and storage conditions
- **Dangerous reactions:** Not known.
- **Conditions to Avoid / Stability:** Excess heat, flame or pressure.
- **Incompatibility with Substances:** Not applicable.
- **Dangerous products of decomposition:** Not known.

11. Information on Toxicology:

- **Acute toxicity:** Not available.

Primary irritant effect

- **On the skin:** No irritation effect known.
Single-component Stop solution: GHS05 corrosivity
- **Inhalation:** No irritation effect known.
Single-component Stop solution: Mucous membrane irritation, coughing and breathlessness.
- **On the eye:** No irritant effect known. Single-component Stop solution: GHS05
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
To our knowledge, the product has no harmful effects when handled properly for its intended use.

12. Information on Ecology

Data on the ecological effect of the product are not known.

- **Aquatic toxicity:** Single-component Stop solution is slightly hazardous to water (Class 1).
- **Persistence and degradability:** No information.
- **Mobility in soil:** No information.
- **Results of PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** No.

13. Information on Disposal

- **Product:** Disposal in accordance with applicable regulations.
- **Contaminated packaging:** Disposal in accordance with applicable regulations.
- **Recommended cleaning agent:** Water.

14. Transport information

• **Land transport RID/ADR**

UN#: 3316

Class: 9

PG: II

Proper Shipping Name: Chemical kit

• **Inland waterways ADN / ADR:**

UN#: 3316

Class: 9

PG: II

Proper Shipping Name: Chemical kit

• **Maritime transport IMDG**

UN#: 3316

Class: 9

PG: II

Proper Shipping Name: Chemical kit

Marine Pollutant: No

Severe Marine Pollutant: No

• **Air transport IATA**

UN#1845

Class: 9

PG: II

Proper Shipping Name: Chemical kit

Inhalation Packing Group I: No

- **Environmental hazards:** Slightly hazardous to water.
Do not allow product to reach ground water, water bodies or sewage system.
- **Special precautions for user:** Observe the general safety regulations when handling chemicals and carefully read the instruction manual of the product.

• **Transportation in bulk according to Annex II of MARPOL73/78 and IBC:** Not applicable.

• **Additional information:** Information in this section relate to the kit as a whole.

15. Regulatory Information

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

Labelling according to EC regulation:

Regulation (EC) No. 1272/2008 (CLP)

(CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures)

The following regulations apply for the STOP solution and Detection Solution TMB:



GHS05 with signal word: Warning



GHS08 Signal word: Danger!

Hazard Statement(s):

H290: May be corrosive to metals.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H360: May damage the unborn child.

Precautionary statement(s):

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338:

IF IN EYES: Rinse continuously with water for several minutes.

Remove contact lenses if present and easy to do continue rinsing.

P337+P313:

Get medical advice/attention.

P302+P352:

IF ON SKIN: Wash with soap and water.

• **Special designation of certain preparations:**

Safety data sheet available for professional users.

National regulations:

• **Classification according to regulation of industrial safety:** -

• **Water hazard class:** Generally, not hazardous to water.

Single-component Stop solution is less hazardous to water (Class 1).

The following regulations apply for Phenol:



GHS08 Signal word: Danger!



GHS05 with signal word: Warning

Hazard Statement(s):

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

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

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 + P310

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

- **Special designation of certain preparations:**

Safety data sheet available for professional users.

National regulations:

- **Classification according to regulation of industrial safety: -**

- **Water hazard class:** Generally, not hazardous to water.

Single-component Stop solution is less hazardous to water (Class 1).

16. Other Information

The contained information is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. However the above named supplier assumes any liability whatever for the accuracy or completeness of the information contained herein. It does not represent a guarantee of the properties of the product. Final determination of suitability of any material is the sole responsibility of the user. All materials may contain unknown hazards and should be used with caution. Although certain hazards are mentioned above, we cannot guarantee that these are the only hazards that exist.

Relevant Hazard Statement(s):

H225: Highly flammable liquid and vapour
H301: Toxic if swallowed
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H360: May damage the unborn child.
H371: May cause damage to organs
H400: Very toxic to aquatic life.
H411: Toxic to aquatic life with long lasting effects.

Department issuing MSDS: Safety Personnel

Contact: BioTeZ Berlin-Buch GmbH

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures