

Safety Data Sheet

Australia

Section 1. Identification

Product name **Bacterial genomicPrep Mini Spin Kit, 50 purifications**

Catalogue Number **28-9042-58**



Chemical product name Proteinase K

Synonyms Proteinase K; Protease E.C.3.4.21.62 (bacillus licheniformis, into which protease producing gene of bacilluslentos was introduced); Tritirachium album serine proteinase; (4-nitrophenyl)methyl (4R,5S,6S)-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-3,4-diphenoxy-5-phosphonoxy-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylate

Product type Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Analytical chemistry.
Laboratory chemicals
Scientific research and development

Company details

Manufacturer

Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Supplier

Global Life Sciences Solutions Australia Pty Ltd
495 Blackburn Road
Mount Waverley VIC 3149
Australia
tfn: 1800 150 522

Emergency telephone number **000 and +61 2 9846 4000**

Section 2. Hazard(s) identification

Classification of the substance or mixture SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
RESPIRATORY SENSITISATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms



Signal word

DANGER

Hazard statements

Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary statements



| | |
|---|---|
| Prevention | Wear protective gloves. Wear eye or face protection. Wear respiratory protection. Avoid breathing vapour. Wash thoroughly after handling. |
| Response | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | Not applicable. |
| Other hazards which do not result in classification | None known. |

Section 3. Composition and ingredient information

| | |
|-------------------------------|--|
| Substance/mixture | Substance |
| Chemical identity | Proteinase K |
| Other means of identification | Proteinase K; Protease E.C.3.4.21.62 (bacillus licheniformis, into which protease producing gene of bacilluslentus was introduced); Tritirachium album serine proteinase; (4-nitrophenyl)methyl (4R,5S, 6S)-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-3,4-diphenoxy-5-phosphonoxy-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylate |

| Ingredient name | % (w/w) | Identifiers |
|--|---------|----------------------------------|
| Proteases with the exception of those specified elsewhere in this database | 100 | CAS: 39450-01-6 EC: 254-457-8 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

| | |
|--------------|---|
| Eye contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure. |
| Skin contact | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | |
|--------------|--|
| Eye contact | Causes serious eye irritation. |
| Inhalation | May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | Causes skin irritation. |
| Ingestion | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | |
|---------------------|--|
| Eye contact | Adverse symptoms may include the following: pain or irritation watering redness |
| Inhalation | Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|--|
| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | No specific treatment. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

| | |
|---|---|
| Suitable extinguishing media | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | No specific data. |
| Special protective actions for fire-fighters | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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|------------------------------------|---|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| Environmental precautions | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

Methods and material for containment and cleaning up

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| Small spill | Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. |



Section 7. Handling and storage

Precautions for safe handling

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|--|--|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | Do not store above the following temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

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|----------------------------------|--|
| Appropriate engineering controls | Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |
| Environmental exposure controls | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

Individual protection measures

| | |
|------------------------|--|
| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. |
| Skin protection | |
| Hand protection | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| Body protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

| | |
|--|---|
| Physical state | Liquid. |
| Colour | White. |
| Odour | Not available. |
| Odour threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Decomposes |
| Boiling point or initial boiling point and boiling range | Decomposes |
| Flash point | Not applicable. |
| Burning time | Not applicable. |
| Burning rate | Not applicable. |
| Evaporation rate | Not available. |
| Flammability | Non-flammable but will burn on prolonged exposure to flame or high temperature. |
| Lower and upper explosive (flammable) limits | Not available. |
| Vapour pressure | Not available. |
| Relative vapour density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |

| | Media | Result |
|---|--|----------------|
| | cold water | Easily soluble |
| | hot water | Easily soluble |
| Solubility in water | Not available. | |
| Partition coefficient: n-octanol/ water | Not available. | |
| Auto-ignition temperature | Not available. | |
| Decomposition temperature | Not available. | |
| SADT | Not available. | |
| Viscosity | Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available. | |
| Flow time (ISO 2431) | Not available. | |

Particle characteristics

| | |
|----------------------|-----------------|
| Median particle size | Not applicable. |
|----------------------|-----------------|

Section 10. Stability and reactivity

| | |
|------------------------------------|--|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | No specific data. |
| Incompatible materials | No specific data. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

| | |
|------------------------------|---|
| Conclusion/Summary [Product] | To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated. |
|------------------------------|---|

Skin corrosion/irritation

Not available.

| | |
|------------------------------|----------------|
| Conclusion/Summary [Product] | Not available. |
|------------------------------|----------------|

Serious eye damage/eye irritation

| | |
|--|---|
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| Respiratory corrosion/irritation | |
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| Respiratory or skin sensitization | |
| Not available. | |
| Skin | |
| Conclusion/Summary [Product] | Not available. |
| Respiratory | |
| Conclusion/Summary [Product] | Not available. |
| Germ cell mutagenicity | |
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| Carcinogenicity | |
| Not available. | |
| Conclusion/Summary [Product] | To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated. |
| Reproductive toxicity | |
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| Specific target organ toxicity (single exposure) | |
| Product/ingredient name | Result |
| proteases with the exception of those specified elsewhere in this database | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 |
| Specific target organ toxicity (repeated exposure) | |
| Not available. | |
| Aspiration hazard | |
| Not available. | |
| Information on likely routes of exposure | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| Potential acute health effects | |
| Eye contact | Causes serious eye irritation. |
| Inhalation | May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin contact | Causes skin irritation. |
| Ingestion | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|--------------|--|
| Eye contact | Adverse symptoms may include the following: pain or irritation watering redness |
| Inhalation | Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|----------------------------------|---|
| Short term exposure | |
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Long term exposure | |
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Potential chronic health effects | |
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| General | Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Reproductive toxicity | No known significant effects or critical hazards. |

Numerical measures of toxicity

| |
|--------------------------|
| Acute toxicity estimates |
| N/A |

Section 12. Ecological information

| |
|---|
| <u>Toxicity</u> |
| Not available. |
| Conclusion/Summary[Product] Not available. |

Persistence and degradability

| |
|---|
| Not available. |
| Conclusion/Summary[Product] Not available. |

Bioaccumulative potential

| |
|----------------|
| Not available. |
|----------------|

Mobility in soil

| | |
|----------------------------------|---|
| Soil/water partition coefficient | Not available. |
| Other adverse effects | No known significant effects or critical hazards. |

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | ADG | ADR/RID | IMDG | IATA |
|--|--|----------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| Proper shipping name | - | - | - | - |
| Class | - | - | - | - |
| Label | | | | |
| PG | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. |
| Additional information | - | - | - | - |
| Special precautions for user | Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. | | | |
| Transport in bulk according to IMO instruments | Not available. | | | |

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | |
|------------------|---|
| Australia | Not determined. |
| United States | Not determined. |
| Canada inventory | Not determined. |
| China | This material is listed or exempted. |
| Japan | Japan inventory (CSCL): Not determined. Japan inventory (ISHL): This material is listed or exempted. |
| New Zealand | This material is listed or exempted. |





Section 16. Any other relevant information

History

| | | | |
|---|------------------|------------------------|--------------|
| Date of printing | 09 February 2026 | Date of previous issue | 18 July 2025 |
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| sds_author@cytiva.com | | | |
| ADG = Australian Dangerous Goods | | | |
| ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road | | | |
| ATE = Acute Toxicity Estimate | | | |
| BCF = Bioconcentration Factor | | | |
| GHS = Globally Harmonized System of Classification and Labelling of Chemicals | | | |
| IATA = International Air Transport Association | | | |
| IBC = Intermediate Bulk Container | | | |
| IMDG = International Maritime Dangerous Goods | | | |
| LogPow = logarithm of the octanol/water partition coefficient | | | |
| MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) | | | |
| N/A = Not available | | | |
| SUSMP = Standard Uniform Schedule of Medicine and Poisons | | | |
| UN = United Nations | | | |

Procedure used to derive the classification

| Classification | Justification |
|--|-----------------|
|  SKIN CORROSION/IRRITATION - Category 2 | Regulatory data |
| SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A | Regulatory data |
| RESPIRATORY SENSITISATION - Category 1 | Regulatory data |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | Regulatory data |
| (Respiratory tract irritation) - Category 3 | |
|  Indicates information that has changed from previously issued version. | |

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.