

MATERIAL SAFETY DATA SHEET

according to Regulations 1272/2008 (EC), 453/2010 (EC), 830/2015 (EC)

Rabbit Polyclonal Antibody (IgG), purified

Current Version: 2.1, May 2019

Replaced Version: 1.1, Dec 2015



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www.lucerna-chem.ch

Abendweg 18

6006 Luzern

* 1. Name of the Product and Company

1.1 Product identifiers

Product/Trade name: Purified Rabbit Polyclonal Antibody (IgG), 100µg/100µl

Product Number: RBP0001 – RBP9999

Brand: Lucerna-Chem AG

REACH No.: This product is a mixture. A registration number is not available.

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

Identified uses: Use as laboratory reagent. Scientific research and development.

Uses advised against: Not for medical use. Not for consumer use.

1.3 Details of the supplier of the safety data sheet

Company: Lucerna-Chem AG, Abendweg 18, 6006 Luzern

Phone: +41 41 420 96 36

Fax: +41 41 420 96 5

E-mail: lucerna-chem@lucerna-chem.ch

1.4 Emergency telephone number

Emergency Phone (Tox Info Suisse): 145 (only if calling from CH)

International emergency Phone: +41 44 251 51 51

* 2. Possible Hazards

2.1 Classification of the substance or mixture

This substance/mixture does not meet the criteria for classification in accordance with Regulation No. 1272/ 2008/EC.

2.2 Labeling elements

Labelling according to Regulation (EC) No 1272/2008 (CLP):	not required
Pictograms:	no pictograms
Signal words:	none
Hazard Statements:	not applicable
Precautionary Statement:	P280 - Wear protective gloves/ protective clothing
Critical hazardous component(s) for labeling:	None of the ingredients is hazardous at its given concentration

2.3 Supplemental Hazard statements

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.

* 3. Composition / Information on Ingredients

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3.1 Chemical characterization of substance/mixture

Components of the mixture	Quantity	Classification according to Regulation (EC) No 1272/2008 [CLP]
Rabbit IgG	100ug/100ul	not classified
Water (H ₂ O)	= 50% < 70%	not classified
Glycerol (C ₃ H ₈ O ₃)	= 30 < 50%	not classified
Sodium azide (NaN ₃)	0.02%	See section 3.2. for classification Not hazardous at the given concentration.
Sodium chloride (NaCl)	150mM	not classified
Potassium chloride (KCl)	2.7mM	not classified
Di-Natrium-Hydrogen-Phosphat-Dihydrat (Na ₂ HPO ₄ x 2H ₂ O)	10mM	not classified
Kaliumdihydrogenphosphat (KH ₂ PO ₄)	1.8mM	not classified

3.2 Hazardous ingredients

The product contains no substances which are considered to be hazardous to health at their given concentration. We recommend handling all chemicals with caution.

Hazardous component	Hazard Statements / Classification (100% conc.)	Conc. in product	Classification according to Regulation (EC) No 1272/2008 [CLP]
Sodium azide (NaN₃) CAS No.: 26628-22-8 EC No.: 247-852-1 Index No.: 011-004-00-7 REACH Reg. No.: 01-2119457019-37-XXXX	Acute Tox. 2 (oral): H300 Aquatic Acute 1: H400 Aquatic Chronic 1: H410 Health properties: EUH032	0.02%	Not hazardous at the given concentration. Generic cut-off for Acute Tox. 2 is 0.1%

For full text of abbreviations, please see Section 16

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4. First Aid Measures

4.1 Description of first aid measures

General Information:

First aider: Pay attention to self-protection!

When in doubt or if symptoms are observed, get medical advice.

Never give anything by mouth to an unconscious person.

Immediately remove any contaminated clothing, shoes or stockings.

Skin contact: Wash immediately with plenty of water and soap. Do not wash with:

Solvents/Thinner. Immediately remove any contaminated clothing, shoes or stockings. Seek medical attention if irritation persists.

Eye contact Flush opened eye for >10 minutes under running water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if any discomfort continues.

Ingestion: Clean mouth with water. Get medical attention if symptoms occur. Do not induce vomiting unless directed to do so by medical personnel.

Inhalation: Move person into fresh air. Get medical advice if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: Prolonged skin contact may cause irritation

Eye contact: May cause temporary eye irritation

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Ingestion: May cause discomfort if swallowed

4.3 Indication of any immediate medical attention and special treatment needed

No specific recommendations. Treat symptomatically.

* 5. Fire Fighting Measures

5.1 Fire extinguishing media

Suitable extinguishing media: Use water spray, foam, dry extinguishing powder, carbon dioxide (CO₂). Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media: No information available.

5.2 Special hazards arising from the substance or mixture

None in particular.

5.3 Advice for firefighters

Follow standard procedure for chemical fires. As conditions warrant, wear an approved self-contained breathing apparatus and protective suit.

5.4 Further information

No flammability anticipated.

* 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Always use gloves and good hygienic practices. As conditions warrant, wear appropriate personal protection equipment (gloves, goggles/face shield, boots, respirator, safety clothing).

Avoid contact with skin, eyes and clothes. Immediately remove any contaminated clothing, shoes or stockings. Wash contaminated clothing before reuse.

Avoid dust formation. Do not breathe dust. Ensure adequate ventilation.

6.2 Environmental precautions

Avoid release into the environment. Prevent entry into drains.

If released: Clean up spills properly. Prevent further leakage or spillage, if save to do so.

6.3 Methods and materials for containment and cleaning up

Small amounts (microliters): Use paper towels to absorb the liquid.

Large amounts: soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dispose contaminated material as waste according to *section 13*.

6.4 Reference to other sections

For information on safe handling, see section 7

For information on personal protection information, see section 8

For information on disposal, see section 13.

* 7. Handling and Storage

7.1 Precautions for a save handling

P280 - Wear protective gloves and/or clothing.

Do not eat, drink or smoke when using this product.

Avoid contact with skin, eyes and clothing.

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Avoid release to the environment. Prevent entry into drains.

Wash parts of the body in contact with substance thoroughly after handling

Remove and wash contaminated clothing before re-use.

7.2 Conditions for save storage, including any incompatibilities

Keep away from food and beverages. Keep container tightly closed. Store according to product specifications on the datasheet.

7.3 Specific end use

Use as laboratory reagent. Scientific research and development.

8. Limitation to Exposition and Protective Equipment

8.1 Control parameters

This product contains no relevant components with workplace exposure limits (MAK-Values)

Exposure parameters for adults:

	Sodium Azide (NaN_3) CAS-No.: 26628-22-8	Glycerol ($\text{C}_3\text{H}_8\text{O}_3$) CAS-No.: 56-81-5
TWA (Switzerland)	0.2 mg/m ³ , 8 hours	
STEL (Switzerland)	0.4 mg/m ³ , 15 minutes	
ACGIH: TLV	0.29 mg/m ³	10 mg/m ³
NIOSH: REL	0.3 mg/m ³	
Cal/OSHA: PEL	0.11 ppm, 0.3 mg/m ³	15 (dust); 5 (resp.) mg/m ³
MAK short-time	0,4 e mg/m ³	100 e mg/m ³
MAK long-time	0,2 e mg/m ³	50 e mg/m ³
DNEL*, inhalation		56 mg/m ³

*DNEL: Derived No Effect Level (DNEL) according to (EG) Nr. 1907/2006

Predicted no effect concentration (PNEC):

	Sodium Azide (NaN_3) CAS-No.: 26628-22-8	Glycerol ($\text{C}_3\text{H}_8\text{O}_3$) CAS-No.: 56-81-5
PNEC value freshwater	0.35 µg/L	0,885 mg/l
PNEC value marine water	15 ng/L	0,088 mg/l
PNEC - freshwater, intermittent releases	3.5 µg/L	8,85 mg/l
PNEC - freshwater, intermittent releases	150 ng/L	
PNEC sediment - freshwater	16.7 µg/kg	3,3 mg/kg
PNEC sediment - marine water	0.72 µg/kg	0,33 mg/kg
Sewage treatment plant (STP)	30 µg/L	1000 mg/l
Terrestrial compartment - soil	no hazard identified	0,141 mg/kg

8.2 Exposure controls

8.2.1 General protective and hygienic measures:

Handle in accordance with good industrial or laboratories hygiene and safety practice. Avoid contact with the substance. Immediately remove any contaminated clothing, shoes or stockings. Wash contaminated clothing before reuse. Provide eye and emergency safety showers. Wash hands before breaks and after work. When using do not eat, drink or smoke.

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8.2.2 Personal protective equipment

Eye/face protection

Recommended.

Safety glasses should be consistent with EN 166 or equivalent.



Wear safety goggles

Skin protection

Wear suitable gloves.

Suitable material: Nitrile rubber (0.11mm).

Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Replace gloves when worn. 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.



Wear handle gloves

Body Protection

Long sleeved lab coat (En 13034) recommended. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance at the specific workplace.

Respiratory protection

Respiratory protection not required in normal conditions.

If exposure limits are exceeded or when irritation or other symptoms occur, use a respirator approved by NIOSH / MSHA or European Standard EN 136. Recommended filter type: particle filter

8.2.3 Control of environmental exposure

No special environmental precautions required. Prevent entry into drains. Avoid release into environment and water.

9. Physical and Chemical Characteristics

9.1 Information on basic physical and chemical properties

a) Physical state:	liquid
b) Appearance:	colorless, clear
c) Odour:	odorless
d) pH at 20°C:	7.4
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) Flammability in air (upper/lower)	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available

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m) Relative density	no data available
n) Water solubility	soluble
o) Partition coefficient: n- octanol/water	no data available
p) Auto-ignition temperature	not self-igniting
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety informations:

VOC Content(%): no data available

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10. Stability and Reactivity

10.1 Reactivity

Sodium azide may react with lead and copper plumbing to form highly explosive metal azides (see 10.3)

10.2 Chemical stability

Stable under recommended storage and usage conditions (see Section 7)

10.3 Possibility of hazardous reactions

Not to be expected at proper use. The **sodium azide concentration (0.02%)** provided in this product, although not classified as hazardous, can lead to **concentration build-ups in drains that may react with lead and copper plumbing to form explosion**.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Acidic materials and heavy metals.

10.6 Hazardous decomposition products

None under normal use conditions. Hazardous decomposition products formed under fire conditions (Nitrogen oxides (NO_x), azides).

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11. Toxicological Information

11.1 Information on toxicological effects

Product does not present an acute toxicity hazard based on known or supplied information.

Acute toxicity estimate (ATE, oral): 17'400 mg/kg (according to regulation (EC) No 1272/2008)

- **Acute toxicity – ingestion, oral:** May be harmful if swallowed
- **Acute toxicity – inhalation:** May be harmful by inhalation
- **Acute toxicity – skin contact:** Contact may cause irritation
- **Acute toxicity – eye contact:** Contact may cause irritation

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Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Sodium Azide (NaN_3)	27mg/kg (Rat) 27mg/kg (Mouse)	50mg/kg (Rat) 20mg/kg (Rabbit)	37mg/m ³ (Rat) 32.4mg/m ³ (Mouse)
Glycerol ($\text{C}_3\text{H}_8\text{O}_3$)	= 12'600 mg/kg (Rat)	12'600 mg/kg (Rabbit)	No data available

- **Skin corrosion/irritation:** Not classified as corrosive/irritant to skin
- **Serious eye damage/irritation:** Not classified as damaging or irritant to the eye
- **Sensitisation:** Not classified as a respiratory or skin sensitiser
- **Carcinogenicity:** Not classified as carcinogenic
- **Mutagenic effects:** Not classified as mutagenic
- **Germ cell mutagenicity:** Not classified as germ cell mutagenic
- **Reproductive toxicity:** Not classified as reproductive toxicant
- **Target organ toxicity- single exposure:** Not classified as specific target organ toxicant
- **Target organ toxicity- repeated exposure:** Not classified as specific target organ toxicant
- **Aspiration hazard:** Not classified as presenting an aspiration hazard

Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed:** gastrointestinal complaints, vomiting, diarrhoea, dizziness, headache, Cyanosis (blue coloured blood)
- **If in eyes:** essentially non-irritating
- **If inhaled:** Irritation to respiratory tract
- **If on skin:** no data available

11.2 Additional Information

To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated. Laboratory experiments in animals have shown sodium azide (100% conc.) to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, hepatic and cerebral effects.

12. Ecological Information

General note: As supplied and regarding the quantity supplied (0,1ml), the preparation is not expected to present significant adverse environmental effects. However, avoid release into the environment. Sodium azide (in higher concentrations than supplied) is harmful to aquatic life.

12.1 Toxicity

No specific data available on this preparation.

- Estimated fish LC₅₀ for this mixture: **1300mg/L**
determined acc. to regulation (EC) No 1272/2008)

		26628-22-8 Sodium Azide (NaN_3 , 100%)	56-81-5 Glycerol (100%)
Fish	<i>Lepomis macrochirus</i>	LC ₅₀ = 0.7mg/L (96h) TLM = 1.5ppm (24h)	
	<i>Oncorhynchus mykiss</i>	LC ₅₀ = 0.8mg/L (96h)	LC ₅₀ = 67'500 mg/l (96 h)
	<i>Carassius auratus</i>		LC ₅₀ > 5000 mg/l (24h)

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Crustacea	<i>Daphnia pulex</i>	EC ₅₀ = 4.2mg/L (48h)	
Algae		IC ₅₀ = 272 mg/l	IC ₅ > 10'000 mg/l (16h)
Protozoa		EC ₅₀ = 5 - 14 mg/l	
Bacteria	<i>Photobacterium phosphoreum</i>	EC ₅₀ = 38mg/L (96h)	

12.2 Persistence and degradability

No data available/not applicable on the preparation. Sodium azide must be regarded as not rapidly degradable.

12.3 Bioaccumulative potential

No data available/not applicable on the preparation

12.4 Mobility in soil

No data available/not applicable on the preparation. Sodium azide is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

This preparation 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/not applicable on the preparation

13. Disposal Considerations

13.1 Waste treatment methods

Any chemical waste is a potential environmental pollutant. The generation of waste should be avoided or minimized wherever possible. **ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL LOCAL, REGIONAL, NATIONAL, AND INTERNATIONAL REGULATIONS.** If in doubt, please contact your local waste disposal company, where you will obtain information on laboratory waste disposal.

Disposal Methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not dispose together with regular garbage. Do not dispose via ground, land, surface waters, sewage, drains, natural streams or rivers.

- **Large amounts, unused product:** Leave chemicals in original containers. Do not mix with other waste. Large amounts should be consigned to a licensed waste disposal company.
- **Residual amounts:** consign to a licensed waste disposal company.
- **Contaminated container disposal:** consign to a licensed waste disposal company.
- **Container disposal:** Completely emptied packages can be recycled.
- **Recommended cleaning/diluting agent:** Water
- **Waste code:** no data available
- **Additional Informations:** no data available

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14. Transport

General note: **This preparation/mixture is NOT subject to transport regulations.**

14.1 UN-Nummer

ADR/RID, IMDG, ICAO/IATA: This product does not require a classification for transport

14.2 UN proper shipping name

ADR/RID, IMDG, ICAO/IATA: -

14.3 Transport hazard class(es)

ADR/RID, IMDG, ICAO/IATA: This product does not require a classification for transport

14.4 Packaging group

ADR/RID, IMDG, ICAO/IATA: -

14.5 Environmental hazards

ADR/RID, IMDG, ICAO/IATA: -

14.6 Special precautions for user

Warning: -

Danger code (Kemler): -

EmS number: -

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

15. Regulatory Information

This MSDS is in accordance with swiss ational requirements and the regulations (EC) No 1272/2008, 453/2010 (EC) and 830/2015 (EC).

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

Control of major-accident hazards involving dangerous substances:

Legislation 96/82/EG does not apply

Water hazard class: Class B (hazardous to aquatic life if released in large quantities)

Volatile Organic Compounds (VOC): 0% (2010/75/EU)

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this preparation

16. Other Information

16.1 Full text of H-Statements referred to in section 3

Health hazards	Acute Tox. 2 (oral)	Acute oral toxicity (Category 2)
	H300	Fatal if swallowed
Environmental hazards	Aquatic Acute 1	Acute aquatic toxicity (Category 1)
	Aquatic Chronic 1	Langfristig/chronisch gewässergefährdend (Kategorie 1)
	H400	Very toxic to aquatic life
	H410	Very toxic to aquatic life with long-lasting effects
Health Properties	EUH032	Contact with acids liberates very toxic gas

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ADR:	<i>Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</i>
IMDG:	<i>International Maritime Code for Dangerous Goods</i>
IATA:	<i>International Air Transport Association</i>
ICAO:	<i>International Civil Aviation Organization</i>
RID:	<i>Regulations Concerning the International Carriage of Dangerous Goods by Rail</i>
GHS:	<i>Globally Harmonised System of Classification and Labelling of Chemicals</i>
EC No.:	<i>European Inventory of Existing Commercial Chemical Substances</i>
Index No.:	<i>European Community number</i>
CAS:	<i>Chemical Abstracts Service</i>
REACH:	<i>Registration, Evaluation, Authorisation and Restriction of Chemicals</i>
LC50:	<i>lethal concentration, 50 percent</i>
LD50:	<i>lethal dose, 50 percent</i>
PBT:	<i>persistent (P), bioaccumulative(B) and toxich (T)</i>
vPvB:	<i>very persistent (vP) and very bioaccumulative (vB)</i>

*** = Data / content revised compared to the previous version**

16.2 Further information

These informations are put together to the best of our knowledge without demand of completeness and represent no assurance of characteristics of this product. These informations should be understood only as a main thread for the user. Existing laws and regulations are observed by the consignee of our product at one's own risk.

The product is supplied for research use only

---END OF MSDS---