For life science research only.
Not for use in diagnostic procedures.

Polyethylene Glycol 1500
(PEG 1500)

Version: 18
Content Version: June 2021

Cat. No. 10 783 641 001 10 x 4 ml

Store product at +2 to +8°C.

1. General Information

1.1. Contents

Vial / Bottle	Label	Function / Description	Content
1	Polyethylene Glycol 1500 (PEG 1500)	▪ 50% PEG 1500 (w/v) in 75 mM HEPES, pH 8.0, bottled under nitrogen. ▪ Filtered through 0.2 µm pore size membrane; ready-to-use.	10 bottles, 4 ml each

1.2. Storage and Stability

Storage Conditions (Product)

When stored at +2 to +8°C, the product is stable through the expiration date printed on the label.

Vial / Bottle	Label	Storage
1	Polyethylene Glycol 1500 (PEG 1500)	Store at +2 to +8°C. ⚠ ***Keep protected from light.***

1.3. Additional Equipment and Reagent required

Standard laboratory equipment

- Pasteur pipettes
- Conical tubes
- Centrifuge
- Water bath

For fusion of myeloma cells and mouse spleen cells

- Serum-free medium
- Selection medium, such as RPMI 1640, FCS (fetal calf serum), non-essential amino acids, L-glutamine, sodium pyruvate, HAT-media supplement, BM Condimed* or IL-6*

1.4. Application

Polyethylene Glycol 1500 (PEG) is used to induce cell fusion and has become a standard method in somatic cell genetics. PEG-promoted cell fusion is also the standard procedure for the production of hybridoma cells.

2. How to Use this Product

2.1. Protocols

Fusion of myeloma cells and mouse spleen cells

⚠ ***Use serum-free medium for Steps 1 to 11. Starting with Step 12, (cloning), the cell surface must be free of serum.***

1. In a conical tube, mix 1 × 10^8 spleen cells (in 25 ml) and 2 × 10^7 myeloma cells (in 25 ml) in serum-free medium.

2. Spin down the cells 5 to 10 minutes at 200 to 400 × *g*.

3. Remove the supernatant with a Pasteur pipette.
   ⚠ ***Remove the supernatant completely to avoid dilution of PEG.***

4. Break the pellet by gently tapping the bottom of the tube.
   – Place the tube in a +37°C water bath and keep it there during the fusion.

5. Add 1 ml 50% PEG 1500, pre-warmed to +37°C to the pellet using a 1 ml pipette over a period of 1 minute.
   – Stir the cells continuously with the pipette tip.

6. Continue stirring the cells in 50% PEG 1500 for an additional 1 to 2 minutes.

7. Add 1 ml medium, pre-warmed to +37°C to the fusion mixture using a 1 ml pipette over a period of 1 minute.
   –Stir the cells continuously with the pipette tip.

8. Add 3 ml medium, pre-warmed to +37°C over a period of 3 minutes.
   – Stir the cells continuously.

9. Slowly add 10 ml medium, pre-warmed to +37°C.

10. Incubate for 5 minutes at +37°C.

11. Spin down the cells.

12. Discard the supernatant and resuspend the pellet in selection medium, such as RPMI 1640, 10% FCS (fetal calf serum) (v/v), non-essential amino acids (1x), 2 mM L-glutamine, 1 mM sodium pyruvate, HAT-media supplement (1x), 10% BM Condimed* (v/v) or 50 to 100 U/ml IL-6*.

13. Seed cells as usual.

2.2. Parameters

Biological Activity

PEG 1500 is biologically evaluated for high fusion efficiency.

Chemical Formula

$HO(CH_2CH_2O)_nH$

Molecular Weight

1,500 Da

Purity

Peroxides and aldehydes not detectable; free from $Ca^{2}+$.

3. Supplementary Information

3.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

Text convention and symbols	
Information Note: Additional information about the current topic or procedure.	
Important Note: Information critical to the success of the current procedure or use of the product.	
① ② ③ etc.	Stages in a process that usually occur in the order listed.
❶ ❷ ❸ etc.	Steps in a procedure that must be performed in the order listed.
* (Asterisk)	The Asterisk denotes a product available from Roche Diagnostics.

3.2. Changes to previous version

Layout changes.
Editorial changes.

3.3. Ordering Information

Product	Pack Size	Cat. No.
Reagents, kits		
Interleukin-6, human (hIL-6)	200,000 U, 2 µg, 1 ml	11 138 600 001
BM Condimed H1	100 ml	11 088 947 001

3.4. Trademarks

All product names and trademarks are the property of their respective owners.

3.5. License Disclaimer

For patent license limitations for individual products please refer to:
List of biochemical reagent products.

3.6. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

3.7. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

3.8. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site**.

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.

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