Product Information

Glycogen from mussel, Mytilus genus

For Molecular Biology

G1767

Storage Temperature –20 °C

Synonyms: animal starch, liver starch

Product Description

Glycogen is generally preferred over tRNA, yeast RNA or sonicated DNA as a carrier, because it is less likely to interfere with downstream applications. Note oligonucleotides as short as 20 base pairs can be recovered using linear polyacrylamide (LPA) in a DNA precipitation. Oligonucleotides as short as 8 base pairs can be recovered using glycogen.[1] This Glycogen product for molecular biology is a prepared solution of glycogen from mussel, Mytilus genus in sterile redistilled water at a concentration of ~20 mg/mL. This preparation is purified to remove all detectable traces of nickases, RNAses and DNAses. Therefore, this glycogen is a suitable carrier or co-precipitant in RNA and DNA purification.[2,3] Picogram amounts of RNA or DNA can be precipitated from a volume of 0.5 mL by including 20 mg of glycogen (1 mL of solution).

DNase, RNase and nickase: None detected.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This solution may be stored at –20 °C for up to one year.

Procedure

1. Add 1 mL of glycogen solution (G1767, corresponding to 20 mg of glycogen) to RNA or DNA in a volume of up to 500 mL.
2. Add 0.1 volume of 3 M Sodium acetate, pH 5.2 (S7899).
3. Precipitate the DNA or RNA by adding 2–3 volumes ethanol (E7023).
4. Mix thoroughly and incubate at –20 °C for at least 1 hour.

   Note: Quantitative recovery may require incubation at –20 °C for several hours or overnight. Nucleic acids may be stored indefinitely and safely as ethanol precipitates.
5. Centrifuge for 15–20 minutes at maximum speed in a microcentrifuge (14,000–16,000 x *g*). A visible pellet will be formed.
6. Carefully remove the supernatant.
7. Wash the pellet with 70% ethanol. Centrifuge for 2–5 minutes and carefully remove the supernatant.
8. Allow the pellet to air dry for 15–30 minutes.
9. Resuspend the RNA or DNA pellet in 1X TE buffer (T9285) or molecular biology reagent water (W4502).

References

1. Hengen, P.N., Trends Biochem. Sci. (TiBS), 21, 224-225 (1996).
2. Tracy, S., Prep. Biochem., 11, 251-268 (1981).
3. Helms, C. et al., DNA, 4, 39-49 (1985).

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