

Sodium Citrate Anticoagulant (4%)

Cat. No.: S1510784 | Pack size: 100ml | Storage: Store at 2-8°C

Product Information

Item	Description
Product name	Sodium Citrate Anticoagulant (4%)
Catalog No.	S1510784
Pack size	100ml
Specifications & Purity	BioReagent, 4%
Synonyms	4% Sodium Citrate
Storage	Store at 2-8°C
Shipped in	Wet ice
Application	Cell analysis
Stability and storage	Store at 2-8°C long term (12 months).

Contents & Storage

Pack Size	Storage	Shipping
100ml	Store at 2-8°C	Wet ice

Overview

Sodium citrate, also known as trisodium citrate, functions as an anticoagulant by binding to calcium ions (Ca^{2+}) in the blood, forming stable soluble chelate complexes. This effectively removes the key calcium ions involved in the coagulation cascade, thereby preventing blood clotting. This product is suitable for:

Coagulation function testing: such as the determination of prothrombin time (PT), activated partial thromboplastin time (APTT), and other coagulation parameters.

Erythrocyte sedimentation rate (ESR) determination: particularly suitable for ESR measurement using the Westergren Method.

Usage Instructions

Please ensure a thorough understanding of the experimental protocol and strictly adhere to aseptic techniques before use.

1. General Anticoagulation Ratio (Universal)

The recommended volume ratio of anticoagulant to whole blood is 1:9.

Example: Take 0.2 mL of this product, add 1.8 mL of fresh whole blood, and gently invert the tube 5-8 times to mix. Avoid vigorous shaking.

2. Special Ratio for Westergren Method ESR Determination

The recommended volume ratio of anticoagulant to whole blood is 1:4.

Example: Take 0.4 mL of this product, add 1.6 mL of fresh whole blood, and mix as described above.

Precautions

1. Intended Use: This product is for research use only. It is strictly prohibited for clinical diagnosis, blood transfusion, or human treatment.
2. Ratio Accuracy: The anticoagulant-to-blood ratio is critical. An incorrect ratio will directly affect experimental results (e.g., causing falsely prolonged or shortened coagulation times). Use precise pipetting equipment.
3. Sample Handling: Blood samples must be mixed gently immediately after collection. Avoid foaming or hemolysis.
4. Timeliness: It is recommended to complete testing of anticoagulated blood samples within 2 hours. If storage is necessary, follow the specific guidelines for your experiment (typically short-term storage at 2-8°C).
5. Personal Protection: Wear a lab coat, disposable gloves, and necessary eye protection during operation. If contact with skin or eyes occurs, rinse immediately with plenty of water.
6. Waste Disposal: All consumables that have contacted blood, residual samples, and solutions of this product must be treated as biohazardous waste, in compliance with your institution's biosafety regulations.

Safety & Precautions

1. Read the current SDS before use and handle the product according to local laboratory safety and EHS procedures.
2. Treat all blood-contacting materials and residual samples as potentially biohazardous waste and dispose of them according to institutional biosafety procedures.
3. Wear a lab coat, disposable gloves, and appropriate eye protection during operation.
4. For research use only. Do not use for clinical diagnosis, treatment, food, cosmetic, or household applications.

Quality Control

QC Item	Method	Acceptable Range
Appearance	Visual inspection	Clear or product-consistent solution with no visible contamination or leakage
Anticoagulation performance	Use with fresh whole blood at the recommended ratio	Blood remains adequately anticoagulated for the intended research assay
Sterility or microbial control	Lot-specific control according to product specification	Meets the approved specification when the product is labeled sterile
Storage condition	Review label and COA before use	Stored under recommended conditions and used within the valid shelf life

Troubleshooting

Issue	Possible Causes	Corrective Action
Clot formation	• Incorrect anticoagulant-to-blood ratio • Delayed or insufficient mixing • Expired or improperly stored reagent	• Use the recommended ratio • Gently invert immediately after collection • Check storage conditions and lot expiry before use

Issue	Possible Causes	Corrective Action
Hemolysis or abnormal sample condition	• Vigorous shaking • Improper collection technique • Delayed processing	• Mix gently and avoid foaming • Follow validated sample collection procedures • Process samples within the time window required by the experiment
Unexpected assay results	• Ratio or sample handling not controlled • Reagent not appropriate for the assay	• Confirm assay compatibility before use • Run appropriate controls and follow the experimental protocol

Recommended Applications

Cell analysis

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.

- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any product component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.
- Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.