

User Manual

OriCell™ Alizarin Red S Solution

Catalog No. ALIR-10001



Introduction

Alizarin Red S can form stable red complexes with various metal ions and is commonly used as a metal indicator in analytical chemistry. In biological tissues, it reacts with calcium, the primary mineral component of bone, to form chelates. Specifically, Alizarin Red S (the sodium salt of alizarin sulfonate) chelates with calcium salts such as calcium carbonate and calcium phosphate to produce a distinctive orange-red complex. Due to its high sensitivity, Alizarin Red S provides reliable visualization even of trace mineralized calcium deposits, making it an essential tool for detecting calcium accumulation in histological sections.

OriCell™ Alizarin Red S Solution is specifically formulated to effectively stain subtle calcium deposits. It is ideal for identifying and quantifying calcium salt accumulation during the osteogenic differentiation of stem cells.

Note: This product is intended for research use only and is not for diagnostic, therapeutic, clinical, household, or any other applications.

When citing our products in academic publications, please use the following format: “OriCell™ [Product Name] + [Catalog Number], from Cyagen Biosciences.”

Product Stability and Storage Conditions

1. This reagent has a shelf life of 1 year and should be stored at 2–8 °C.
2. The shelf life may be extended if the container remains properly sealed and consistent storage conditions are maintained without frequent temperature fluctuations.

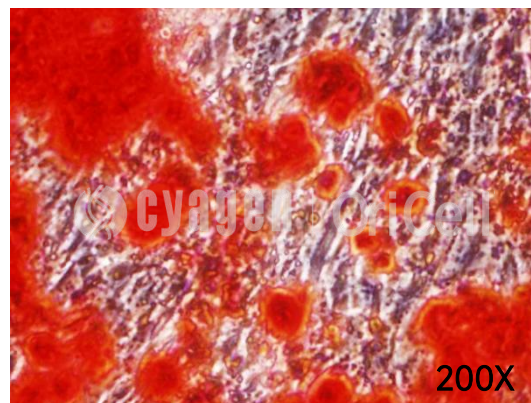
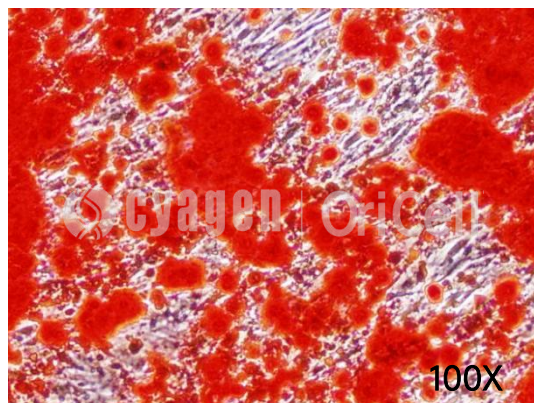
3. Use the reagent before the expiration date. Expired reagents may significantly compromise experimental results.

Alizarin Red S Staining for Osteogenesis

Note:

- (1) Handle all procedures gently to prevent detachment of calcium nodules.
 - (2) Bring OriCell™ Alizarin Red S Solution to room temperature before use.
 - (3) Ensure the presence of calcium nodules before staining.
 - (4) If staining is insufficient, the incubation time may be extended as appropriate.
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1. After the osteogenic induction process is complete, aspirate the differentiation medium from the 6-well plate and wash each well gently 2–3 times with 1× PBS.
 2. Add 2 mL of 4% paraformaldehyde solution or 10% formalin solution to each well and fix the cells at room temperature for 30 minutes.
 3. Aspirate the fixative and gently wash 2–3 times with 1× PBS to ensure complete removal.
 4. Add 2 mL of OriCell™ Alizarin Red S Solution (Cat. No.: ALIR-10001) to each well and incubate for 5–10 minutes at room temperature.
 5. Aspirate the staining solution and rinse the wells 2–3 times with 1× PBS to ensure thorough removal of excess stain.
 6. Add 2 mL of 1× PBS to each well and observe the staining results under a microscope.
 7. Seal the plate with Parafilm and protect from light. The stained plate can be stored at 4 °C for up to 2 weeks.

Alizarin Red S Staining Result



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