

Product Name

Name: MSC Chondro-Staining Kit

Cat. No.: C37B0-0150

Size: 1 kit

Package specifications

Product	Storage	Form	Cat. No.	Amount
Chondro- Fixation	2 - 8°C	Colorless transparent liquid	C37B1-0020	1 × 20 mL
Chondro-Wash I	2 - 8°C	Colorless transparent liquid	C37B2-0050	1 × 50 mL
Chondro- Staining	2 - 8°C	Blue liquid	C37B3-0020	1 × 20 mL
Chondro-Wash II	2 - 8°C	Colorless transparent liquid	C37B4-0050	1 × 50 mL
Chondro- Inspection	2 - 8°C	Colorless transparent liquid	C37B5-0010	1 × 10 mL

Intended Use

Use for staining of chondrocytes after chondrogenic differentiation of mesenchymal stem cells (MSC), and recommend especially for staining verification after chondrogenic differentiation using MSCgo™ Chondrogenic XF medium (Satorius, 05-220-1B & 05-221-1D).

Staining principle

Alcian Blue 8GX is a member of the Alcian Blue dye family and is widely used for the staining of acidic polysaccharides, such as glycosaminoglycans in cartilage or other tissues, and exopolysaccharides secreted by cells.

Chondrogenic differentiation of hMSC in 3D spheroid culture results in the formation of cartilage with a typical extracellular matrix rich in aggrecan. Aggrecan is a proteoglycan that can be used as an indicator for cartilage formation and can be detected with Alcian Blue, a dark-blue copper-containing dye. Alcian Blue staining is an indication of the formation of mature chondrocytes. The staining intensity can be varied using different conditions of hMSC (e.g., types, age, and passage number).

Main components

Alcian Blue

Application

Evaluation of cartilage staining after chondrogenic differentiation from mesenchymal stem cells.

Storage and Stability

The product should be kept at **2 - 8°C**.

The product is **light-sensitive** and therefore should not be left in the light.

Shelf life: 12 months from date of manufacture

Sample requirements

The samples to be examined should be cartilage formed after chondrogenic differentiation of mesenchymal stem cells. MSCgo™ Chondrogenic XF medium (Biological Industries) is recommended for the induction of chondrogenic differentiation.

Procedure

Take the use of a T25 flask as an example:

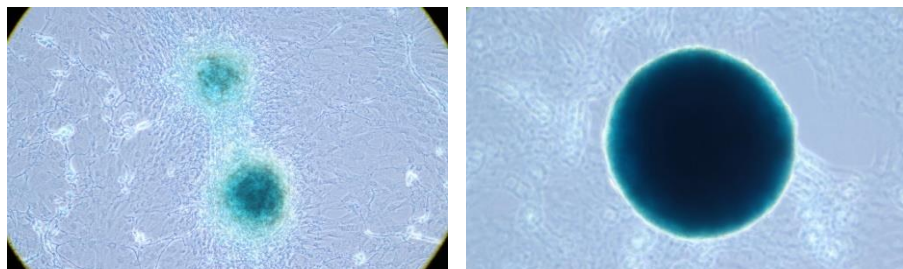
1. Carefully remove the differentiation medium and add 1 mL DPBS (VivaCell C3590-0500) to gently wash the culture flask.
2. Remove the DPBS, add 3 mL Fixation solution (C37B1-0020), and gently shake the culture flask to spread the solution evenly on the whole surface of the flask. Incubate at room temperature for 30 min.
3. Remove the Fixation solution, add 3 mL Wash I solution (C37B2-0050), rinse the flask, and incubate at room temperature for 2 - 3 min.
4. Remove the Wash I solution, add 3 mL Staining Solution (C37B3-0020), spread the solution evenly, and stain at room temperature for 30 min.
5. Carefully remove the Staining Solution and add 3 mL Wash II solution (C37B4-0050) to rinse the cells.
6. Remove the Wash II solution, repeat step 5, and rinse the flask again (if the supernatant is still blue, you can extend the rinsing time or rinse again. Note: do not wash the cells away).
2. Remove the Wash II solution, add 1 mL Inspection Solution (C37B5-0010), observe and take photographs through a bright-field microscope.

Quality Control

MSC Chondro-Staining Kit is tested for cartilage tissue staining.

Explanation of the test results

Under the microscope, it can be observed that chondrocytes are stained blue by Alcian blue (as shown in the pictures below). The intensity of staining will be affected by many factors, such as cell type, cell passage number, differentiation time and culture conditions.



Precaution and Disclaimer

For research use only, not for clinical diagnosis, and treatment.