



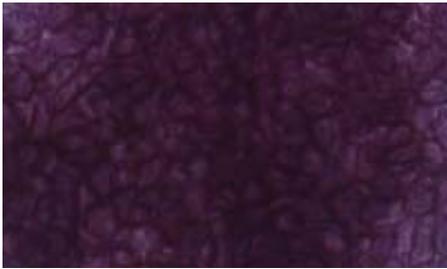
BPStem™ Alkaline Phosphatase Staining Assay

Catalog Number SC-003 100 assay

Storage: 4°C

Background

Stem cells differ from other kinds of cells in the body. All stem cells—regardless of their source—have three general properties: they are capable of dividing and renewing themselves for long periods; they are unspecialized; and they can give rise to specialized cell types. The activity of alkaline phosphatase, which is the cell surface marker of the undifferentiated cells, was tested to confirm the characteristics of undifferentiated embryonic stem cell.



Undifferentiated Murine embryonic stem cells



Differentiated Murine embryonic stems

Kit Component:

1. Fix Solution-50ml (SC-003-1)
2. AP Staining Solution A-20ml (SC-003-2)
3. AP Staining Solution B-20ml (SC-003-3)

Materials Not Supplied:

1. Human or Mouse Embryonic Stem Cells and Culture Medium
2. 1X PBS
3. 1X PBST (1X PBS containing 0.05% Tween-20)
4. Deionized H₂O

Preparation of Staining Solution:

Prepare the Alkaline Phosphatase Staining Solution by mixing Staining Solution A and Staining Solution B at 1:1 ratio (Staining Solution A : Staining Solution B)

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Staining Procedure:

1. Culture ES cells for 5 days at a subconfluent density.
2. Aspirate the medium and wash the cells with 1ml of 1x PBST (1xPBS containing 0.05% Tween-20).
3. Fix the ES cells with 0.4ml Fixing Solution at room temperature for 2 minutes.
4. Aspirate the fixative and wash the fixed cells with 1ml of 1xPBST, don't let the wells dry.
5. Removal the wash buffer and add 0.4ml Staining Solution.
6. Incubate the cells at room Temperature for 20 minutes.
7. Aspirate the staining solution and rinse the wells twice with 1xPBS.
8. Add 1ml 1xPBS into stained cells, For long-term storage, overlay the cells with 1X PBS containing 20% Glycerol. Store at 4°C.
9. Count the number of colonies expressing AP (red stem cell colonies), versus the number of differentiated colonies (colorless).

For research use only, not clinic and diagnostic.

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