

Alkaline Phosphatase Staining Assay (Red) (ALPr)

Cat. No. 8288
500 tests*

Introduction

Pluripotent stem cells (PSCs) have the unique capability to proliferate indefinitely and to differentiate into all cell types. Due to their self-renewal property and pluripotency, PSCs have become a promising candidate for therapeutic applications. Elevated level of alkaline phosphatase expression is one of the most widely used stem cell markers. ScienCell™ Alkaline Phosphatase Staining Assay kit is optimized to detect alkaline phosphatase in PSCs. This assay kit utilizes the Fast Red TR/Naphthol AS-MX as the immunohistology substrate for alkaline phosphatase (ALP). The ALP positive, undifferentiated cells stain red, providing an efficient system for monitoring stem cell differentiation/undifferentiation.

Kit Components

Cat. No.	# of vials	Name	Quantity	Storage
8288a	1	Staining Solution A (10X)	2.5 ml	-20°C, in the dark
8288b	1	Staining Solution B (1X)	25 ml	-20°C, in the dark
8288c	1	Staining Buffer	25 ml	-20°C, in the dark

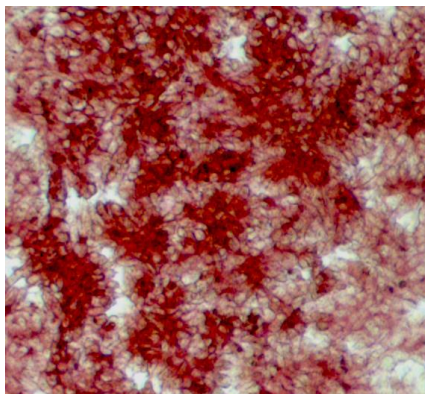
* 500 tests (or chambers) if performed in an 8-well chamber slide using 100 ul total volume per chamber.

Quality Control

Each lot of ALPr is routinely tested on undifferentiated human induced pluripotent stem cells (hiPSCs).

Procedures

1. Gently aspirate the cell culture media.
2. Wash the cell twice with PBS. Aspirate the wash solution.
3. Fix the cells with 4% paraformaldehyde (not supplied) for 10 minutes.
4. In the meantime, dilute Staining Solution A 1:10 in Staining Buffer, respectively. For example, for every 9ml of Staining Buffer, add 1ml of Solution A.
5. After fixing the cells, remove the paraformaldehyde and wash cells three times with PBS.
6. Remove PBS from last wash and apply equal volumes of diluted Solution A and B onto cells. Incubate for 10-30min in dark and check on stainings every 5min.
7. Stop the reaction by washing the cells twice with distilled H₂O.



Detection of alkaline phosphatase in human induced pluripotent stem cells cultured in STEMium™ (cat #5801) under feeder-free conditions.