Senescence Detection Kit ab65351

Overview

Product name: Senescence Detection Kit
Detection method: Colorimetric
Sample type: Tissue, Adherent cells
Assay type: Enzyme activity
Assay time: 1h 10m

Product overview:
Senescence Detection Kit (ab65351) is designed to histochemically detect SA-beta-Gal activity in cultured cells and tissue sections, a known characteristic of senescent cells. The SA-beta-Gal is present only in senescent cells and is not found in presenescent, quiescent or immortal cells. See Senescence Assay Kit ab228562 to detect beta galactosidase activity in senescent cells by flow cytometry.

Senescence assay protocol summary:
- wash cells / sections with PBS
- fix with fixative solution for 10 min
- wash with PBS
- incubate in staining solution mix for 1 hr
- analyze staining with a microscope

Notes:
Senescence is thought to be a tumor suppressive mechanism and an underlying cause of aging. Senescence represents an arrested state in which the cells remain viable, but not stimulated to divide by serum or passage in culture. Senescent cells display increase of cell size, senescence-associated expression of beta-galactosidase (SA-beta-Gal) activity, and altered patterns of gene expression.

Properties

Storage instructions: Store at -20°C. Please refer to protocols.
Storage buffer: Preservative: None

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>250 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>100X Staining Supplement</td>
<td>Red</td>
<td>1 x 1.5ml</td>
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Relevance

Cellular senescence is a growth-arrest program by which normal diploid cells lose the ability to divide, and it plays a critical role in regulating lifespan both in vivo and in vitro. Cellular senescence occurs as reflection of organism aging and in response to internal and external stress signals.

Images

Senescence-associated beta-galactosidase staining at the 2\textsuperscript{nd}(A), 4\textsuperscript{th}(B), 8\textsuperscript{th}(C), 12\textsuperscript{th} passage in vitro expansion. Cells were plated at a density of 10,000 cells/cm\textsuperscript{2} for 24h before staining. Five representative images (100x) were taken from diverse areas of cell culture, using phase-contrast microscopy to assess the number of positive cells.

*Image obtained from Angelucci S et al; Proteome Sci, 2010 Mar 26;8:18*

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