Product datasheet

beta Galactosidase Staining Kit ab102534

2 References 1 Image

Overview

Product name: beta Galactosidase Staining Kit
Sample type: Adherent cells, Suspension cells
Assay type: Direct

Product overview:
The LacZ gene from *E. coli* is one of the most commonly used reporter genes for testing the efficiency of expression vector mediated gene transfer and for studying the regulation of promoters of genes. The LacZ gene encodes the enzyme ß-galactosidase, which is very stable, resistant to proteolytic degradation, can utilize a variety of substrates and can be easily assayed in situ.

Abcam's beta Galactosidase Detection Kit (ab102534) utilizes X-gal as the substrate for ß-galactosidase.

Visit our FAQs page for tips and troubleshooting.

Notes:
This kit has been optimized for transfected cells. If you want to detect senescence, we recommend using Senescence Detection Kit (ab65351).

Properties

Storage instructions: Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>250 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixative Solution (1X)</td>
<td>NM</td>
<td>1 x 125ml</td>
</tr>
<tr>
<td>Staining Solution (1X)</td>
<td>WM</td>
<td>1 x 125ml</td>
</tr>
<tr>
<td>Staining Supplement (100X)</td>
<td>Red</td>
<td>1 x 1.5ml</td>
</tr>
<tr>
<td>X-Gal</td>
<td>Green</td>
<td>1 x 150mg</td>
</tr>
</tbody>
</table>

Relevance:
Beta galactosidase is a hydrolase enzyme that cleaves beta-linked terminal galactosyl residues from gangliosides, glycoproteins, and glycosaminoglycans. Beta galactosidase is an essential enzyme in the human body. Deficiencies in the protein can result in galactosialidosis or Morquio B syndrome. Senescent cells display senescence-associated expression of beta galactosidase activity.

Cellular localization:
Isoform 1: Lysosome. Isoform 2: Cytoplasm, perinuclear region. Note=Localized to the perinuclear
area of the cytoplasm but not to lysosomes.

Images

Gamma-radiation induced senescence in hFOB cells. The number of senescence-associated-β-galactosidase positive cells (left panel) clearly increases 72h after 8 Gy γ irradiation. Representative data was from one of a total of 3 indepent experiments.

Image obtained from Li XH et al; PLOS One; 2012;7(5):e36604

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