MMP-3 Activity Assay Kit (Fluorometric) ab118972

Overview

Product name: MMP-3 Activity Assay Kit (Fluorometric)
Detection method: Fluorescent
Sample type: Cell culture supernatant, Milk, Urine, Tissue Extracts, Cell culture media
Assay type: Enzyme activity
Sensitivity: < 0.05 mU/well
Assay time: 1h 00m
Species reactivity: Reacts with: Mammals, Other species

Product overview

In Abcam's MMP-3 Activity Assay Kit, MMP-3 hydrolyzes a specific FRET substrate to release the quenched fluorescent group Mca, which can be detected fluorometrically at Ex/Em=325/393 nm. The kit provides a rapid, simple, sensitive and reliable test which can also be used as a high throughput assay of MMP-3 activity. The assay sensitivity is < 50 µU.

Visit our FAQs page for tips and troubleshooting.

Notes

The matrix metalloproteinase-3 (MMP-3, stromelysin-1) exhibits a number of activities that would make it a particularly good tumor promoter. Like several other MMPs, MMP-3 was first cloned and later recloned as a cancer-specific gene. In addition to degrading numerous extracellular matrix components, MMP-3 can activate gelatinase B, the collagenases and several serpin-type serine proteinase inhibitors. Moreover, it can release a number of cell surface molecules, including E-cadherin, a known contributor to cancer development.

Properties

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mca Standard (1 mM)</td>
<td>Yellow</td>
<td>1 x 20µl</td>
</tr>
<tr>
<td>MMP-3 Assay Buffer</td>
<td>WM</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>MMP-3 Positive Control (lyophilized)</td>
<td>Green</td>
<td>1 vial</td>
</tr>
<tr>
<td>MMP-3 Substrate</td>
<td>Red</td>
<td>1 x 200µl</td>
</tr>
</tbody>
</table>

Function

Can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and...
Sequence similarities
Belongs to the peptidase M10A family.
Contains 4 hemopexin-like domains.

Domain
The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.

Cellular localization
Secreted > extracellular space > extracellular matrix.

Images

MMP-3 Mca Standard

MMP-3 Positive Control

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