



Caspase-3, 7 Activity Assay Kit

Catalog number: AR4005

This package insert must be read in its entirety before using this product.

For research use only. Not for use in diagnostic procedures.

Catalog Number: AR4005, Storage:

Introduction

Caspases are a family of proteases that initiate the process of apoptosis in mammalian cells. Both Caspase-3 and 7 are the members of cysteine aspartate proteases. Caspase-3, also referred as CPP32, is a member of the CED-3 subfamily of caspases and most studied caspases of the mammalian cells. Caspase-3 is one of the critical enzymes of apoptosis and also plays a central role in mediating nuclear apoptosis, including chromatin condensation and DNA fragmentation (Porter, A.G. and Janicke, R.U, 1999).

Our Caspase-3,7 Assay Kit, Colorimetric provides a simple and convenient method for assaying the activity of caspases 3 and 7, which is based on the hydrolysis of the labeled substrate Ac-DEVD-pNA (acetyl-Asp-Glu-Val- Asp p-nitroanilide) by Caspase-3 and 7, releasing the pNA (p-nitroaniline) moiety from the substrate. The released pNA has the max absorbance at 405 nm ($\epsilon_{405\text{nm}} = 10.5$) and its concentration is calculated by measuring the absorbance values at 405 nm or from a standard calibration curve prepared using the pNA Dye Standard, using a microplate reader or spectrophotometer.

The assay can be performed in 100 μl volume in a 96 well plate using an [ELISA plate](#) reader or in 1 ml volume and measured in a spectrophotometer, using quartz cuvettes, since plastic cuvettes attenuate the absorption at 405 nm. Comparison of the absorbance of the released pNA from an apoptotic sample with an uninduced control allows determination of the fold increase in Caspase-3 and 7 activities.

Overview

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SKU/Catalog Number	AR4005
Description	Our Caspase-3,7 Assay Kit, Colorimetric provides a simple and convenient method for assaying the activity of caspases 3 and 7, which is based on the hydrolysis of the labeled substrate Ac-DEVD-pNA (acetyl-Asp-Glu-Val- Asp p-nitroanilide) by Caspase-3 and 7, releasing the pNA (p-nitroaniline) moiety from the substrate. The released pNA has the max absorbance at 405 nm ($\epsilon_{405\text{nm}} = 10.5$) and its concentration is calculated by measuring the absorbance values at 405 nm or from a standard calibration curve prepared using the pNA Dye Standard, using a microplate reader or spectrophotometer.
Cite This Product	Caspase-3, 7 Activity Assay Kit (Boster Biological Technology, Pleasanton CA, USA, Catalog # AR4005)

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