

# Caspase-1 Inhibitor Assay Kit ab102489

[1 References](#) [1 Image](#)

### Overview

<b>Product name</b>	Caspase-1 Inhibitor Assay Kit
<b>Detection method</b>	Fluorescent
<b>Sample type</b>	Adherent cells, Suspension cells
<b>Assay type</b>	Quantitative
<b>Assay time</b>	1h 30m
<b>Product overview</b>	<p>Abcam's Caspase 1 Inhibitor Drug Detection Kit provides an effective means for screening caspase inhibitors using fluorometric methods. The assay utilizes synthetic peptide substrate YVAD-AFC (AFC, 7-amino-4-trifluoromethyl coumarin). Active caspase-1 cleaves the synthetic substrate to release free AFC which can then be quantified by fluorometry. Compounds to be screened can directly be added to the reaction and the level of inhibition of caspase-1 activity can be determined by comparison of the fluorescence intensity in samples with and without the testing inhibitors.</p> <p>Visit our <a href="#">FAQs page</a> for tips and troubleshooting.</p>
<b>Notes</b>	<p>This product is manufactured by BioVision, an Abcam company and was previously called K151 Caspase-1 Inhibitor Drug Screening Kit (Fluorometric). K151-100 is the same size as the 100 test size of ab102489.</p> <p>Caspases have been shown to play a crucial role in apoptosis induced by various deleterious and physiologic stimuli. Inhibition of caspases can delay apoptosis, implicating a potential role in drug screening efforts.</p>
<b>Platform</b>	Microplate reader

### Properties

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

Components	100 tests
2X Reaction Buffer I	1 x 10ml
Active Caspase 1	1 x 100 units
DTT II	1 x 100µl

Components	100 tests
YVAD-AFC	1 x 0.5ml
Z-VAD-FMK	1 x 10 $\mu$ l

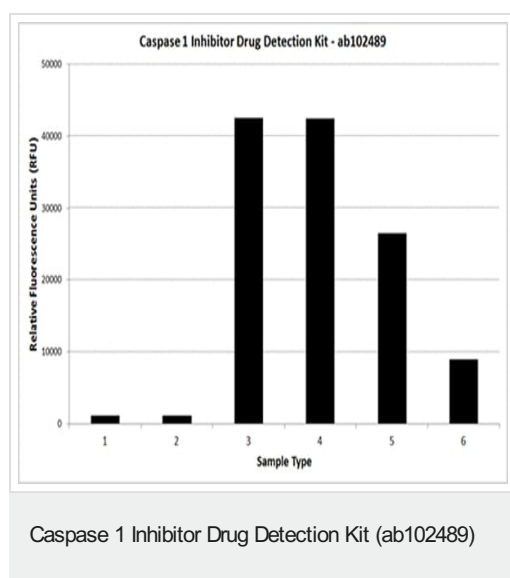
## Relevance

Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a2b2 tetramer to form the active enzyme. Caspase 1 is similar to the cell death gene CED3 of *C. elegans* and regulates multiple proinflammatory cytokines, including Interleukin 1b and interferon-gamma-inducing factor. Caspase 1 plays a role in down stream of Caspase 8 which is involved in Fas-mediated apoptosis.

## Cellular localization

Cytoplasmic

## Images



Caspase activity (RFU) in presence of 0 $\mu$ M - 40 $\mu$ M of z-VAD-FMK (generic caspase inhibitor), assessed using YVAD-AFC as caspase 1 substrate and following Caspase 1 Inhibitor Drug Detection Kit (ab102489) protocol. Lanes:

- 1.- Background Control: no Caspase 1, no z-VAD-FMK
- 2.- Positive Inhibition Control: no Caspase 1, +z-VAD-FMK
- 3.- Positive Control: + Caspase 1, no z-VAD-FMK
- 4.- Caspase 1 + 2.5 $\mu$ M z-VAD-FMK
- 5.- Caspase 1 + 10 $\mu$ M z-VAD-FMK
- 6.- Caspase 1 + 40 $\mu$ M z-VAD-FMK

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