



emulate

Protocol for Emulate Organ-Chips:  
Human Cleaved Caspase-3 (Asp 175) Quantification

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EP198 v1.0

TITLE Human Cleaved Caspase-3 Quantification	DOCUMENT EP198	VERSION 1.0
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Goals:	Key Steps:	Other Required Materials:
Quantify cleaved Caspase-3 from Emulate Organ-Chip lysates	<ul style="list-style-type: none"> <li>Prepare all reagents, samples, and standards</li> <li>Lyse cells</li> <li>Run the assay</li> <li>Read plate</li> </ul>	<ul style="list-style-type: none"> <li>Abcam Human Cleaved Caspase-3 (Asp 175) <i>in vitro</i> SimpleStep ELISA® Kit (Abcam, Cat. No. ab220655)</li> <li>Plate reader</li> </ul>

## Introduction

The Cleaved Caspase-3 (Asp175) SimpleStep ELISA® kit is designed for the quantitative measurement of Active Caspase-3 (Asp175) protein in human cells. Caspase-3 is a cytoplasmic cysteine protease involved in the activation cascade of caspases responsible for cell apoptosis.

The SimpleStep ELISA uses an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocaptures the sample analyte in solution. This three-part complex is then immobilized via immunoaffinity of an anti-tag antibody coated on the well.

This endpoint can be applied to measure apoptosis in Organ-Chips as part of toxicity testing or other types of studies.

## Method

Sample type	Organ-Chip cell lysate See Emulate Protocol EP135 Cell lysis for protein extraction.
Recommended assay flow rate	60 µL / h
Recommended effluent dilution	No dilution needed  Note: Sample dilution may need to be adjusted further to accommodate for any experimental modifications by the user. Caspase levels will change depending on cell culture media used, cell injury status, or based on donor-to-donor variability. Therefore, sample dilutions may need to be modified to accommodate different experimental conditions or cells from different donors.
Run assay as described on supplier site	<a href="https://www.abcam.com/human-cleaved-caspase-3-asp175-elisa-kit-ab220655.html">https://www.abcam.com/human-cleaved-caspase-3-asp175-elisa-kit-ab220655.html</a>

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