

# IncuCyte<sup>®</sup> Caspase-3/7 Reagent for Apoptosis

Catalog number: 4440

## Presentation, storage and stability

The IncuCyte<sup>®</sup> Caspase-3/7 Reagent is supplied as one vial (20 µl) of 5 mM solution in dimethylsulfoxide (DMSO), with each vial providing sufficient quantity for performing 100-200 tests (1 test = 1 well of 96-well microtiter plate). Upon receipt, the solution should be stored at 4°C. When stored as described the stock solutions will be stable for at least 6 months.

## Background and intended use

The IncuCyte Caspase-3/7 Reagent for Apoptosis couples the activated caspase-3/7 recognition motif (DEVD) to a DNA intercalating dye and is ideally suited to the mix-and-read, real-time quantification of cells undergoing caspase-3/7 mediated apoptosis. Addition of the IncuCyte Caspase-3/7 Reagent to normal healthy cells is non-perturbing to cell growth and morphology. When added to tissue culture medium, the inert, non-fluorescent substrate crosses the cell membrane where it is cleaved by activated caspase-3/7 resulting in the release of the DNA dye and green fluorescent staining of the nuclear DNA. With the IncuCyte<sup>®</sup> integrated analysis software, fluorescent objects can be quantified and background fluorescence minimized.

This reagent has been validated for use with the IncuCyte<sup>®</sup> live-cell analysis system and enables the real-time evaluation of cell apoptosis induced by pharmacological agents and/or genetic and environmental factors. Furthermore, our IncuCyteCaspase-3/7 Reagent for Apoptosis can be combined with the IncuCyte<sup>®</sup> system confluence metrics (phase), our range of IncuCyte<sup>®</sup> NucLight nuclear labeling reagents, or the IncuCyte<sup>®</sup> Cytotox Red Reagent to quantify cell proliferation or cytotoxicity alongside apoptosis in a single well.

## Recommended use

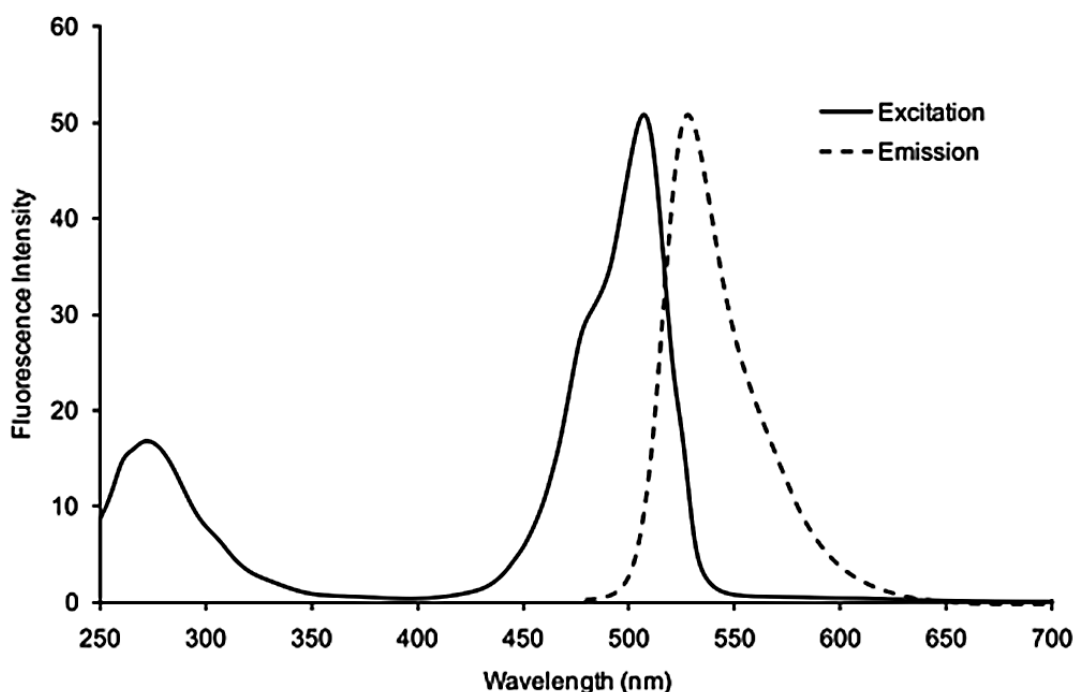
We recommend that IncuCyte Caspase-3/7 Reagent be used at a final concentration of 5 µM (1:1000) in growth media and added directly to cells in culture. When used in an IncuCyte<sup>®</sup> live-cell analysis system, we recommend data collection every 2-3 hours.

Please see the relevant protocol published on our website: [essenbioscience.com/apoptosis](https://www.essenbioscience.com/apoptosis)

## Safety data sheet (SDS) information

Download the SDS from our website: [essenbioscience.com/apoptosis](https://www.essenbioscience.com/apoptosis)

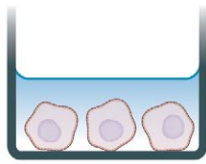
Figure 1. IncuCyte Caspase-3/7 Reagent



Excitation and emission spectra of enzymatically-cleaved IncuCyte Caspase-3/7 reagent in the presence of dsDNA. Absorption/emission maxima of IncuCyte Caspase-3/7 reagent bound to DNA: 500/530 nm.

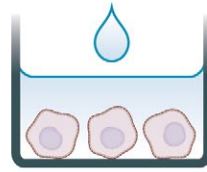
Quick guide

**1** SEED CELLS



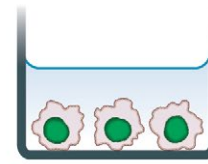
Seed cells (100 µL/well) into a 96-well plate.

**2** PREPARE APOPTOSIS REAGENT AND TREAT CELLS



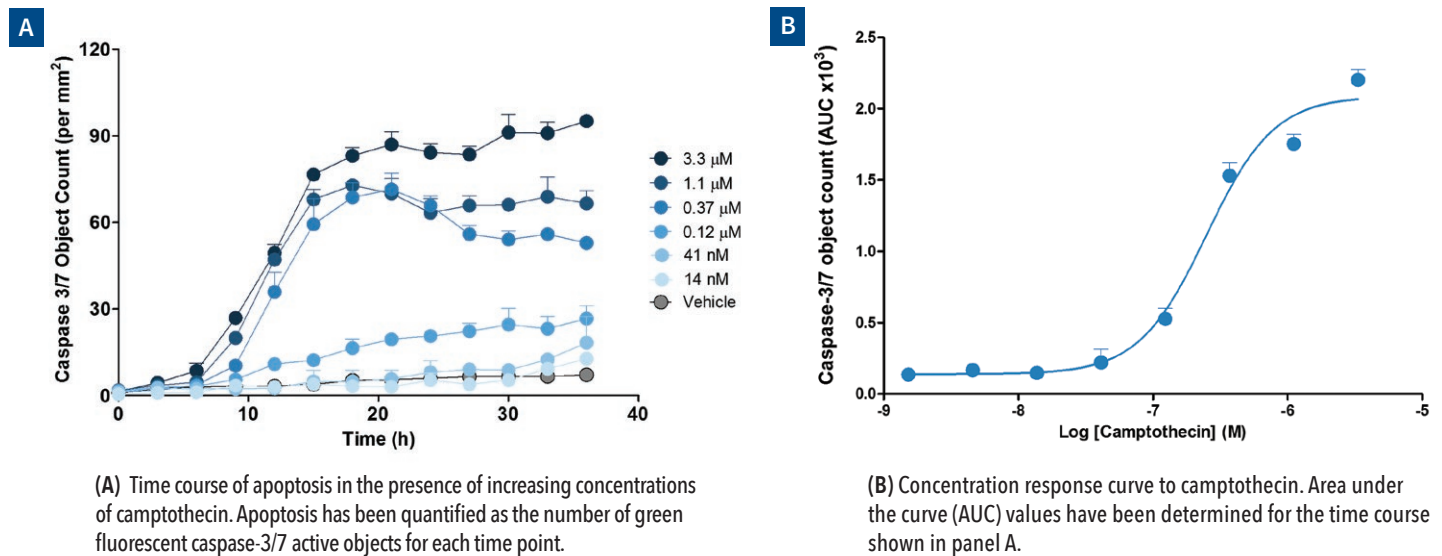
Prepare the desired treatments at 1x in medium containing IncuCyt Caspase-3/7 or Annexin V Reagents and add treatment.

**3** LIVE CELL FLUORESCENT ANALYSIS



Capture images every 2-3 hours (20x or 10x) in the IncuCyt<sup>®</sup> System. Analyze using integrated software.

Figure 2. Concentration dependent activation of the IncuCyt Caspase-3/7 Reagent by the DNA topoisomerase I inhibitor camptothecin in HT-1080 fibrosarcoma cells.



**FOR RESEARCH USE ONLY. NOT FOR THERAPEUTIC OR DIAGNOSTIC USE.**

Product	Cat No.	Amount	Ex. maxima	Em. maxima
IncuCyt <sup>®</sup> Caspase-3/7 Reagent for Apoptosis	4440	20 µl	500 nm	530 nm

Product label licence

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