

IncuCyte[®] Caspase-3/7 Reagents for Apoptosis

Catalog number: 4440 and 4704

Presentation, storage and stability

The IncuCyte[®] Caspase-3/7 Reagents are supplied as single vials (20 µl) of 5 mM (Caspase-3/7 Green) or 0.5 mM (Caspase-3/7 Red) 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 Reagents 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 Reagents 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 fluorescent staining of the nuclear DNA. With the IncuCyte[®] integrated analysis software, fluorescent objects can be quantified and background fluorescence minimized.

These reagents have been validated for use with the IncuCyte[®] 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 IncuCyte Caspase-3/7 Reagents for Apoptosis can be combined with the IncuCyte[®] system confluence metrics (phase), our range of IncuCyte[®] NuLight nuclear labeling reagents, or the IncuCyte[®] Cytotox Red Reagent to quantify cell proliferation or cytotoxicity alongside apoptosis in a single well.

Recommended use

We recommend diluting the IncuCyte Caspase-3/7 Reagents 1:1000 in growth media (final concentration of Caspase-3/7 Green = 5 µM, final concentration of Caspase-3/7 Red = 0.5 µM) and adding directly to cells in culture. When used in an IncuCyte[®] live-cell analysis system, we recommend data collection every 2-3 hours.

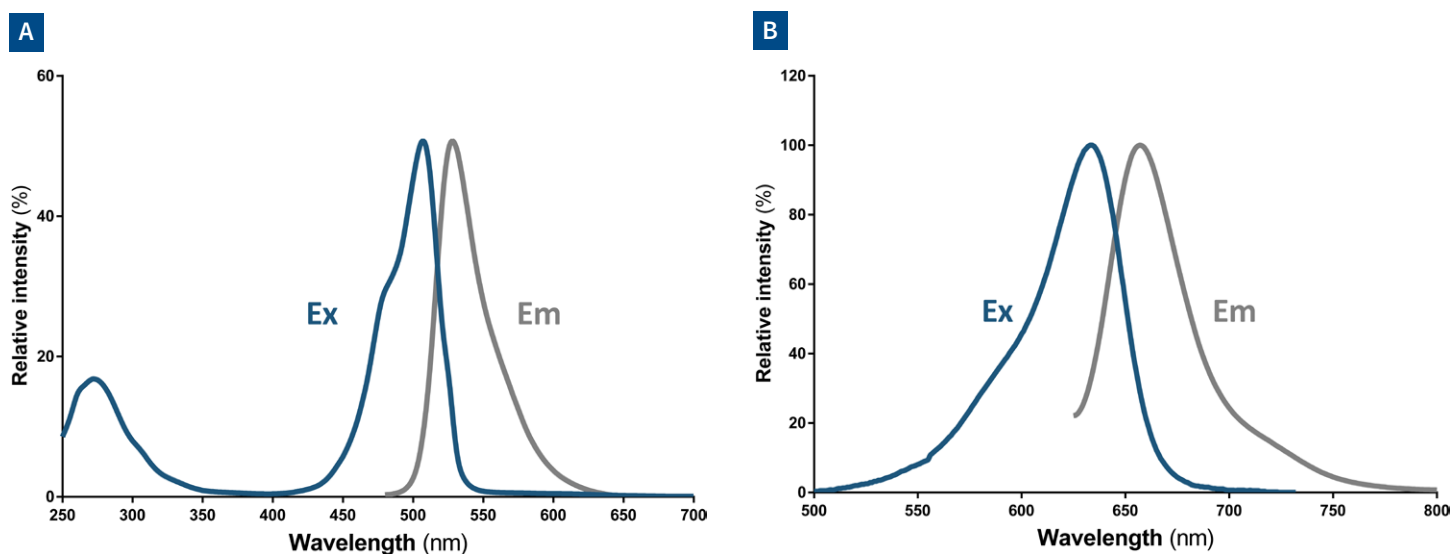
Please see the relevant protocol published on our website:

[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)

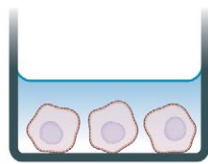
Figure 1.



Excitation and emission spectra for the (A) Caspase-3/7 Green and (B) Caspase-3/7 Red reagents with DNA.

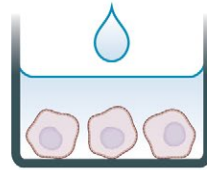
Quick guide

1 SEED CELLS



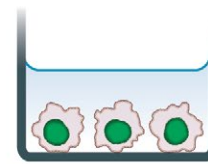
Seed cells (100 μ L/well) into a 96-well plate.

2 PREPARE APOPTOSIS REAGENT AND TREAT CELLS



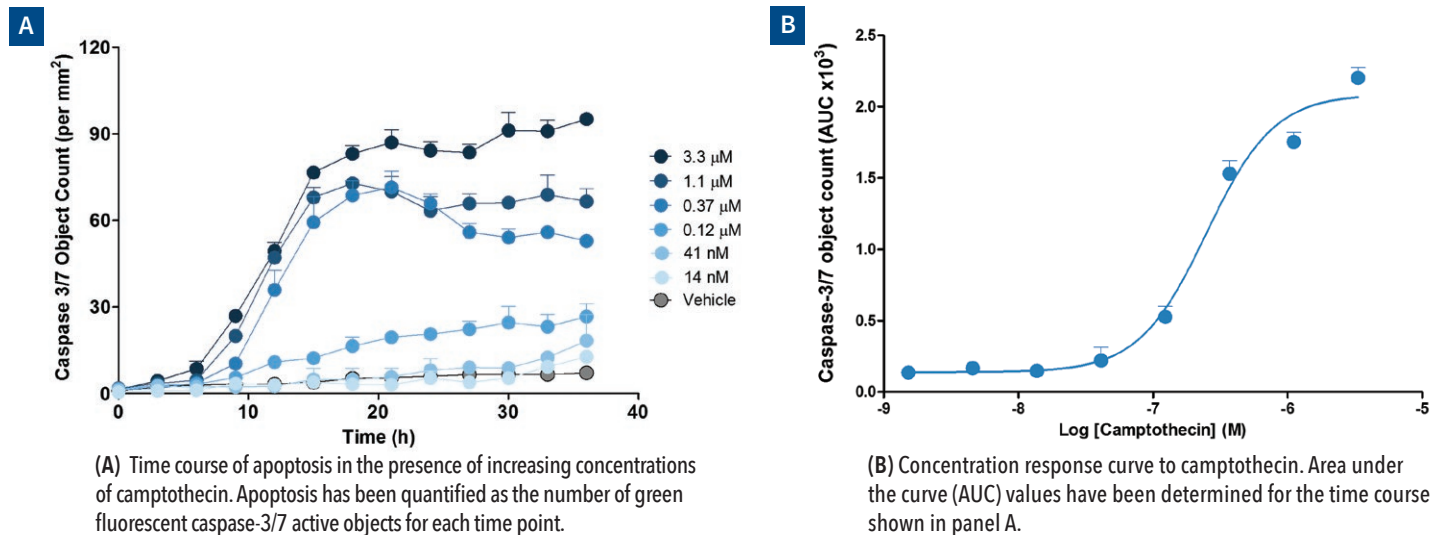
Prepare the desired treatments at 1x in medium containing IncuCyt Caspase-3/7 or Annexin V Reagents and add treatment.

3 LIVE CELL FLUORESCENT ANALYSIS



Capture images every 2-3 hours (20x or 10x) in the IncuCyt[®] System. Analyze using integrated software.

Figure 2. Concentration dependent activation of the IncuCyt Caspase-3/7 Green 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 [®] Caspase-3/7 Green Reagent for Apoptosis	4440	20 μ l	500 nm	530 nm
IncuCyt [®] Caspase-3/7 Red Reagent for Apoptosis	4704	20 μ l	630 nm	650 nm

Product label license

This product is provided under an Agreement between Biotium and Essen BioScience. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. (U.S. patent application No. US60/741,263). The purchase price of this product includes a limited, non-transferable immunity from suit under U.S. Patent application No. US60/741,263 and corresponding patent claims outside of the United States, to use only the purchased amount of the product and components of the product solely for the buyer's own internal research (whether the buyer is an academic or for-profit entity), in a manner consistent with the accompanying product literature. No right to use, sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for any other purpose or a Commercial Purpose, is hereby granted expressly, by implicate or by estoppel. Commercial Purpose mean any activity by a party for consideration and include, but is not limited to : (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service including without limitation, reporting information or data resulting from use of the product or its components for a fee or other commercial consideration; (3) use of the product or its component for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For products that are subject to multiple limited use label licenses, the most restrictive terms apply. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com. All names containing the designation are trademarks of Biotium, Inc.