



**NEW  
PRODUCT**  
added to our  
Cell Viability Assays  
Portfolio!

## Pyroptosis/Caspase-1 Assay, Far Red

Catalog 9158 (25 Tests)

**ICT's Pyroptosis/Caspase-1 Assay, Far Red utilizes our popular FLICA technology to measure caspase-1 activation. Using this kit, researchers can easily detect pyroptotic cells in their whole cell samples *in vitro*.**

Pyroptosis is a highly inflammatory form of programmed cell death that occurs most frequently upon infection with intracellular pathogens and is likely to form part of the antimicrobial immune response.

ICT's Pyroptosis/Caspase-1 Assay Kit utilizes our popular FLICA® technology to detect caspase-1 activation. FLICA probes are cell permeant noncytotoxic **F**luorescent **L**abeled **I**nhibitors of **C**aspases that covalently bind with active caspase enzymes

### Caspase-1 activity in nigericin-treated Jurkat cells.

Jurkat cells were mock treated with a negative control (Non-Induced, Panels A-C), or Nigericin (10  $\mu$ M) to induce NLRP3 inflammasome and caspase-1 activation (Nigericin, Panels D-F). Samples were then immediately stained with 660-YVAD-FMK, therefore FLICA reagent was present throughout the induction process. Following addition of FLICA, the cells were incubated for 24 hours at 37°C, washed, stained with Hoechst 33342 for 15 minutes at room temperature (to label nuclei blue), and examined under a Nikon Eclipse 90i fluorescence microscope equipped with a Hamamatsu Flash 4.0 camera.

In the non-induced sample, many cells with blue nuclei are visible in Panel B. However, in Panel A, which shows 660-YVAD-FMK labeling, no red cells with active caspase-1 are visible. Panel C shows the overlay image combining the blue and red fluorescence channels with the corresponding differential interference contrast (DIC) image, which reveals cell morphology. In the Nigericin treated sample, many cells with blue nuclei are visible in Panel E, the majority of which are labeled red in Panel D, indicating the presence of active caspase-1 enzymes. Panel F shows the image made by overlaying blue fluorescence, red fluorescence, and DIC channels into a single combined image.

