Validation data for THP1-ASC-GFP cells

http://www.invivogen.com/thp1-asc-gfp

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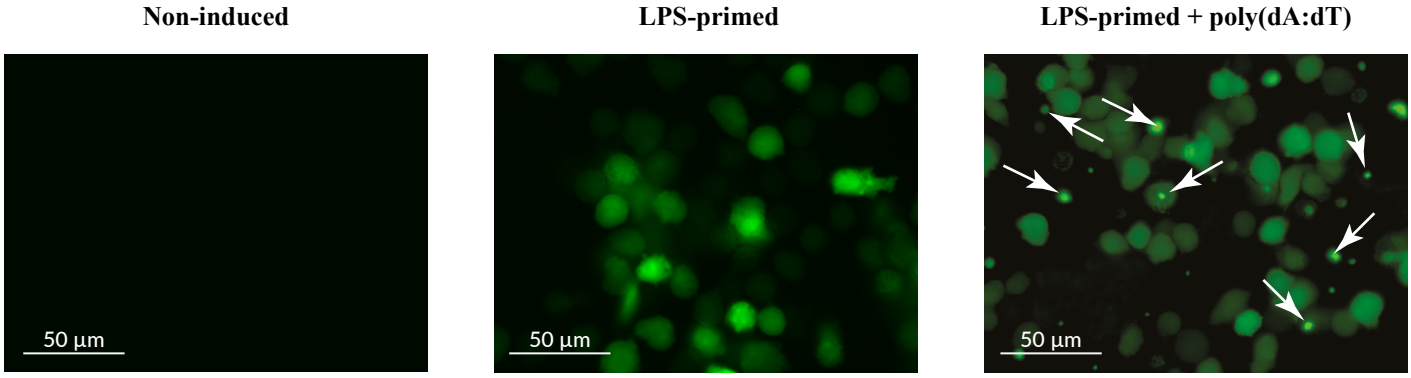
Version 18C14-MM

THP1-ASC-GFP cells are inflammasome reporter cells that allow the monitoring of ASC (apoptosis-associated speck-like protein with a CARD)-dependent inflammasome formation using fluorescence microscopy. These cells stably express a gene encoding an ASC::GFP fusion protein for which expression is driven by an NF-κB-inducible promoter. Hence, in resting cells, no GFP signal is detected. Upon the first step of inflammasome activation ('priming"), NF-κB-dependent ASC::GFP expression is induced and can be observed throughout the cytoplasm. Following the second step of inflammasome activation, ASC::GFP polymerizes to form a macromolecular, micrometer-sized complex. The number of ASC::GFP positive cells and localization of fluorescent ASC specks can be determined by using time-lapse confocal or high-resolution fluorescence microscopy.



Visualization of ASC speck formation by fluorescence microscopy: THP1-ASC-GFP cells were primed with 1 µg/ml LPS-EK for 3 hours, inducing the expression of the ASC::GFP fusion protein in the cytoplasm (middle panel). Cells were then incubated with 250 ng/ml complexed Poly(dA:dT) and ASC speck formation was monitored over 1 to 3 hours post-activation. In most cells, only one speck forms upon inflammasome activation (arrows in right pannel). Scale bar: 50 µm.

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