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Viability/Cytotoxicity Assay Kit for Animal Live & Dead Cells



A convenient assay for staining live (green) and dead (red) cells within the same cell population by flow cytometry or fluorescence microscopy.

Product attributes

Apoptosis/viability marker	Live/dead assay
For live or fixed cells	For live/intact cells
Detection method/readout	Fluorescence microscopy, Flow cytometry
Assay type/options	Endpoint assay, Short term staining (≤24h)
Colors	Green, Red
Storage Conditions	Store at -10 to -35 °C, Protect from light

Product Description

The Viability/Cytotoxicity Assay Kit for Animal Live & Dead Cells contains two dyes (calcein AM and EthD-III) for distinguishing live and dead cells.

The assay employs two probes that detect intracellular esterase activity in live cells and compromised plasma membrane integrity in dead cells. The esterase substrate calcein AM stains live cells green, while the membrane-impermeable DNA dye ethidium homodimer III (EthD-III) stains dead cells red. The kit is suitable for detection using fluorescence microscopy, fluorescence microplate reader, or flow cytometry. This fluorescence-based method of assessing cell viability can be used in place of trypan blue exclusion, ^{51}Cr release, and similar methods for determining cell viability and cytotoxicity.

EthD-III is a proprietary DNA stain developed by Biotium to be a superior alternative to the spectrally similar dye ethidium homodimer I (EthD-I). EthD-III has higher DNA binding affinity and brighter fluorescence (45% brighter than EthD-I).

Find the Right Kit for Your Application

This assay must be used on unfixed cells. The dyes cannot be used for live/dead discrimination in fixed cells or tissues, and cannot withstand fixation after staining. See our full line of Cell Viability and Apoptosis Assays for fixed cell assays and fixable dead cell stains.

Calcein AM-based assays can be used in adherent or suspension cultures of eukaryotic cells, spheroid or 3D-cell culture models, and certain live tissue preparations; download the Reference List for examples. Calcein-AM cannot be used in yeast or bacteria. See our Microbiology Products for bacterial and yeast viability assays.

References

Download a list of Viability/Cytotoxicity Assay Kit for Animal Live & Dead Cells References.

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