TECHNICAL NOTES

Cell-Based Assays

SERVA
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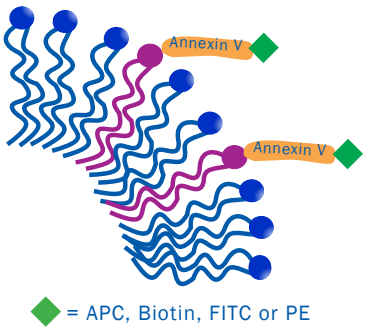
Accurate, Fast and Sensitive Detection of Cellular Metabolic Activities

Annexin V Apoptosis Detection Kits

Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phosphatidylserine (PS). Externalization of phosphatidylserine residues in the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, they can be visualized with fluorescent microscopy or cytometry.

Since loss of membrane integrity is a pathognomonic feature of necrotic cell death, necrotic cells will stain with specific membrane-impermeant nucleic acid dyes such as propidium iodide. The membrane integrity of apoptotic cells can be demonstrated by the exclusion of these dyes.



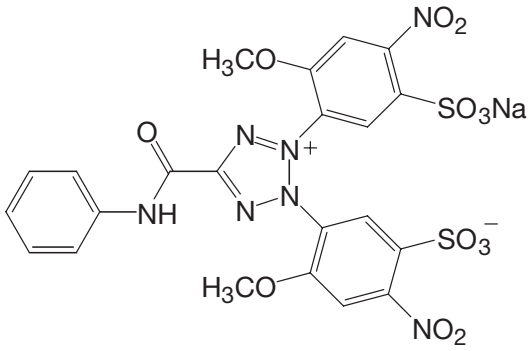
- Detect early/middle stages of apoptosis
- Contains propidium iodide for the differentiation of apoptosis from necrosis
- Non-enzymatic assay avoids fixation
- For both adherent and suspension cells

Ordering Information

Product	Size	Cat. no.
Annexin V-FITC Apoptose Detection Kit	100 Reactions	39900.01
Annexin V-APC Apoptose Detection Kit	100 Reactions	39901.01
Annexin V-Biotin Apoptose Detection Kit	100 Reactions	39902.01
Annexin V-PE Apoptose Detection Kit	100 Reactions	39903.01

XTT Cell Proliferation Assay Kit

Bases on the reduction of the yellow tetrazolium salt XTT to a highly coloured formazan dye by dehydrogenase enzymes in metabolically active cells. This conversion only occurs in viable cells and thus, the amount of the formazan produced is proportional to viable cells in the sample. The formazan dye formed in the assay is soluble in aqueous solution and can be quantified by measuring the absorbance at wavelength 450 nm using a spectrophotometer. The included Activation Reagent significantly improves the efficiency of XTT reduction in cells.



XTT

- Easy to use - no need for additional reagents or cell washing procedures
- Fast - results within 2 - 5 hours
- Sensitive - works with low cell concentrations
- Accurate - formazan produced is proportional to viable cells/well
- Ideal for high throughput screening

Ordering Information

Product	Size	Cat. no.
XTT Cell Proliferation Assay	1000 Reactions	39904.01

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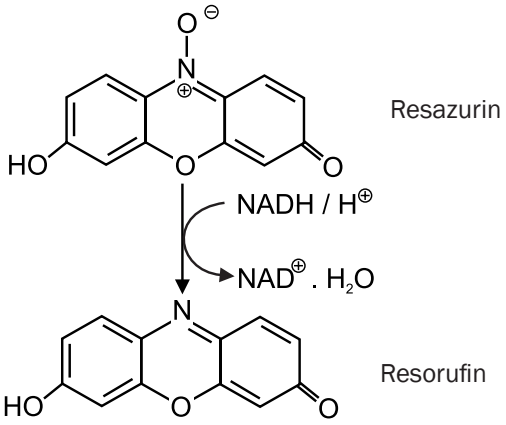
Resazurin Cell Viability Assay

The blue dye resazurin is reduced to the pink coloured, highly red fluorescent resorufin by dehydrogenases in metabolically active cells. Cell viability can be measured by monitoring of the fluorescent signal or by absorbance measurement of the colorimetric signal. The fluorescent signal is detected using 530 – 560 nm exication wavelength and 590 nm emission wavelength. The absorbance is monitored at 570 nm and 600 nm. The fluorescent or colorimetric signal generated is proportional to the number of living cells in the sample.



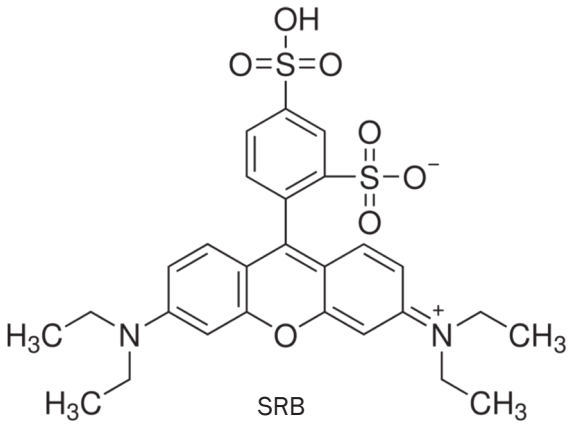
- Easy and fast - one-step procedure without dilution or washing steps
- Reliable and sensitive - fluorescent or colorimetric signal is proportional to number of livings cells

Ordering Information

Product	Size	Cat. no.
Resazurin Cell Viability Assay	4x 2500 Reactions	39905.01

Sulforhodamine B Cytotoxicity Assay

Bases on the binding of the bright-pink sulforhodamine B dye (SRB) to protein components of cells fixed to tissue culture plates. SRB is a bright-pink aminoxanthene dye with two sulfonic groups that bind to basic amino acid residues under mild acidic conditions and dissociate under basic conditions. As the binding of SRB is stoichiometric, the amount of dye extracted from stained cells is directly proportional to the cell mass. The fixed dye is solubilized and measured photometrically at OD 450 nm. The OD values correlate with total protein content and therefore with cell number.



- Faster and better linearity than formazan-based assays
- Stable end-point, thus no need for time-sensitive measurement as with XTT or MTT assays
- Amount of solubilised SRB dye is directly proportional to cell mass
- Good signal-to-noise ratio

Ordering Information

Product	Size	Cat. no.
Sulforhodamine B Cytotoxicity Assay	1000 Reactions	39906.01

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