

Cell Viability, Proliferation and Cytotoxicity assays

Annexin V Apoptosis Detection Kits



Description:

Annexin V Apoptosis Detection Kits is a convenient, easy-to-use and safe method for Apoptosis Detection. Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phosphatidylserine (PS).

Externalization of phosphatidylserine residues on the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, it can be visualized with fluorescent microscopy or cytometry.

Includes for 100 assays:

- 500 µl Labeled Annexin V
- 50 mL Binding Buffer (10x)
- 500 µl Propidium iodide

Applications:

- ✓ Detect early/middle stages of apoptosis.
- ✓ Differentiate apoptosis from necrosis.

Related Products:

- XTT Cell Proliferation Assay Kit (p.78)

Ordering info:

Annexin V-FITC	
Cat No.	Size
CA011	100 assays
Annexin V-APC	
Cat No.	Size
CA012	100 assays
Annexin V-Biotin	
Cat No.	Size
CA013	100 assays
Annexin V-PE	
Cat No.	Size
CA014	100 assays



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.

Advantages & Features:

- ✓ **Easy and fast protocol.**
- ✓ **Versatile:** proven performance for both adherent and suspension cells.
- ✓ **Safe:** non-enzymatic assay that avoids fixation.

XTT Cell Proliferation Assay Kit



Ordering info:

Cat No.	Size
CA031	1,000 assays

Includes for 1,000 assays:

- 2 x 25 mL XTT Cell Proliferation Assay Kit Reagent
- 1 mL Activation Reagent



Related Products:

- SRB Cytotoxicity assay (p.79)
- Resazurin Cell Viability assay (p.79)

Description:

XTT Cell Proliferation Assay Kit is an optimized, accurate and sensitive colorimetric assay that detects the cellular metabolic activities. During the assay, the yellow tetrazolium salt XTT (sodium 2,3-bis(2-methoxy-4-nitro-5-sulfophenyl)-5-[(phenylamino)carbonyl]-2H-tetrazolium) is reduced to a highly colored 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 quantified by measuring the absorbance at wavelength 450 nm using a spectrophotometer. An electron coupling reagent, such as PMS (N-Methylphenazonium methyl sulphate), can significantly improve the efficiency of XTT reduction in cells.

Advantages & Features:

- ✓ **Accurate:** dye absorbance is proportional to the number of cells in each well.
- ✓ **Sensitive:** assayed even in low cell concentrations.
- ✓ **Fast protocol:** results within 2-5 hours with minimal handling steps.
- ✓ **Time-saving protocol:** avoids solubilisation step.
- ✓ **Complete solution:** includes all reagents needed for cell washing procedures.
- ✓ **Safe:** avoids radioactivity.
- ✓ **Optimized:** for high throughput assays (no requires washing or other steps that can cause cell loss and variability).
- ✓ **Cost avoidance:** allows performance directly in a microtiter plate.

Applications:

- ✓ Spectrophotometric quantification of cell proliferation and viability in response to pharmaceutical, chemical, nutrients and environmental compounds.
- ✓ High throughput screening.