

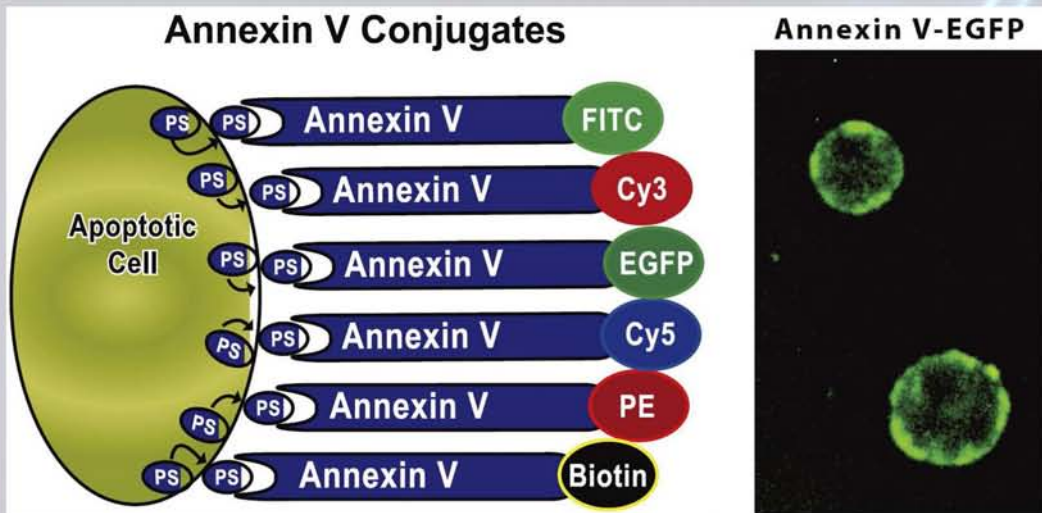


是位於舊金山灣區的生技公司，多年來不斷開發各式分析試劑用於細胞凋亡、代謝、細胞增生、細胞損傷與修復、基因調控、訊息傳導、幹細胞等等相關研究，並行銷世界60餘國。BioVision提供各式分析試劑套組、抗體、重組蛋白與化學藥品，協助客戶在各項細胞相關研究的實驗進展。



Annexin V Apoptosis Kits & Reagents

早期細胞凋亡 (Early Apoptosis)會造成細胞膜表面的變化，其中最主要的變化是細胞膜上的 phosphatidylserine (PS)會由細胞膜內翻轉至細胞膜表面，這種現象在正常的細胞膜上是不會發生的。由於PS是屬於帶負電的磷脂，與Annexin V具有高度的親和力，因此當Annexin V接上螢光或其他標定物時，就能夠作為偵測早期細胞凋亡的工具。當細胞開始進行細胞凋亡之時，PS會由細胞膜內翻至表面，這時候放帶有標定物的Annexin V與PS產生緊密結合，使得apoptosis cell細胞膜被標定螢光，就可以利用螢光顯微鏡觀察或以流式細胞儀 (Flow Cytometer) 計算進行apoptosis的細胞數。



左圖是Biovision提供的Annexin V種類；右圖是apoptosis cell經由Annexin V-EGFP標定後在螢光顯微鏡下觀察的結果

Biovision Annexin V相關產品

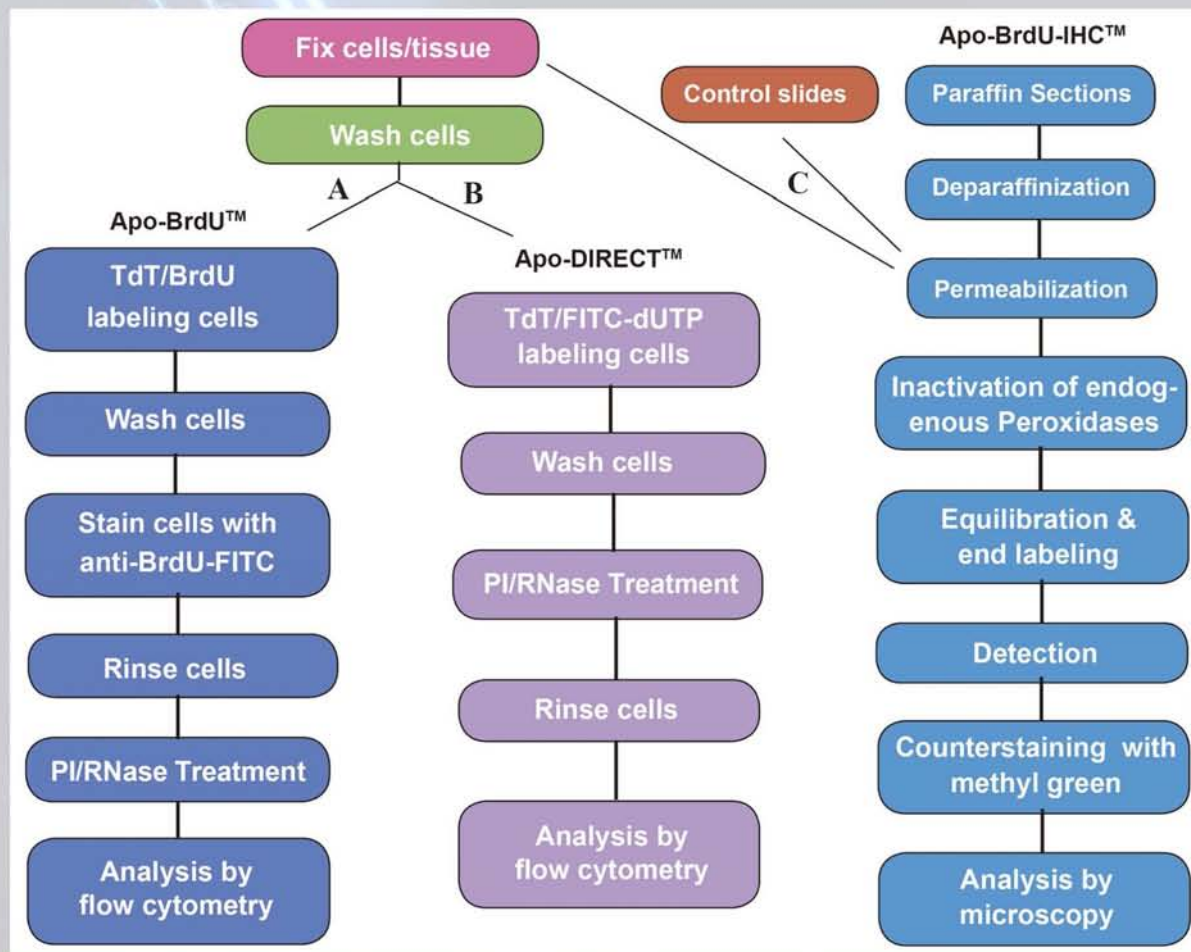
Annexin V Reagents	Cat. #	Size
Annexin V, Unlabeled Reagent	1005-100, 1005-1000, 1005-5000	100 µg, 1 mg, 5 mg
Annexin V-Biotin Reagent	1003-100, 1003-1000	100 µg, 1 mg
Annexin V-Cy3 Reagent	1002-200, 1002-1000	200 assays, 1000 assays
Annexin V-Cy5 Reagent	1013-200, 1013-1000	200 assays, 1000 assays
Annexin V-EGFP Reagent	1004-200, 1004-1000	200 assays, 1000 assays
Annexin V-FITC Reagent	1001-200, 1001-1000	200 assays, 1000 assays
Annexin V-PE Reagent	1014-200, 1014-1000	200 assays, 1000 assays
Annexin V-PE/Cy5 Reagent	1015-200, 1015-1000	200 assays, 1000 assays
1X Annexin V Binding Buffer	1035-100	100 ml
10X Annexin V Binding Buffer	1006-100	100 ml
Propidium Iodide (1 mg/ml)	1056-1	1 ml

Biovision Annexin V相關產品

Annexin V Apoptosis Kits	Cat. #	Size
Annexin V-FITC Apoptosis Detection Kit	K101-25, K101-100, K101-400	25 assays, 100 assays, 400 assays
Annexin V-Cy3 Apoptosis Detection Kit	K102-25, K102-100, K102-400	25 assays, 100 assays, 400 assays
Annexin V-EGFP Apoptosis Detection Kit	K104-25, K104-100, K104-400	25 assays, 100 assays, 400 assays
Annexin V-Cy5 Apoptosis Detection Kit	K103-25, K103-100, K103-400	25 assays, 100 assays, 400 assays
Annexin V-PE Apoptosis Detection Kit	K128-25, K128-100, K128-400	25 assays, 100 assays, 400 assays
Annexin V-PE-Cy5 Apoptosis Detection Kit	K129-25, K129-100, K129-400	25 assays, 100 assays, 400 assays
Annexin V-Biotin Apoptosis Detection Kit	K109-25, K109-100, K109-400	25 assays, 100 assays, 400 assays
Annexin V-FITC Apoptosis Detection Kit Plus	K201-25, K201-100, K201-400	25 assays, 100 assays, 400 assays
Annexin V-Cy3 Apoptosis Detection Kit Plus	K202-25, K202-100, K202-400	25 assays, 100 assays, 400 assays

TUNEL-based DNA Fragmentation Assay Kits

Terminal deoxynucleotidyl transferase dUTP Nick End Labeling (TUNEL) assay是一種偵測細胞內斷裂DNA的方法。由於細胞凋亡的時候會啟動核酸內切酵素 (Endonuclease) · genomic DNA會被切成約180~200bp倍數的片段 · 而端點位置隨之出現缺口。TUNEL assay是利用terminal deoxynucleotidyl transferase (TdT)將dUTP接在genomic DNA 3' 端的缺口處 · 實驗者可以使用BrdU或是螢光標定的dUTP (Fluorescent-labeled dUTP)取代dUTP · 就能夠標定apoptosis cell。Biovision提供了4種不同的TUNEL-base assay kit · 可分別應用在apoptosis cell detection或是IHC實驗。



TUNEL-base Assay Kit	Cat. #	Size
ApoBrdU™ DNA Fragmentation Assay Kit	K401-60	60 assays
ApoBrdU-Red™ DNA Fragmentation Kit	K404-60	60 assays
ApoBrdU-IHC™ DNA Fragmentation Assay Kit	K403-50	50 assays
ApoDIRECT™ DNA Fragmentation Assay Kit	K402-50	50 assays



ImmunoChemistry Technologies (ICT) 是美國首屈一指的試管外與試管內之細胞內部螢光分析的專家。ICT研發的細胞內部螢光分析試劑與動物體內完整細胞分析套組可以用在任何細胞與階段性的疾病病理分析，包括細胞凋亡 (apoptosis)、細胞壞死 (necrosis)、細胞毒性 (cytotoxicity)、氧化壓力 (oxidative stress)、癌症 (cancer)、和神經退化性疾病 (neurodegeneration)。主要產品線有細胞凋亡試劑與ELISA相關緩衝液。



產品概述與原理

FLICA (Fluorescent Labeled Inhibitor of Caspases) caspase detection kits 提供試管外、完整細胞的 caspase 活性偵測絕佳的方法。FLICA probes 是由一個具高親和性、抑制caspase的胜肽序列與一個螢光物質組成，胜肽上面的fluoromethyl ketone (FMK) moiety可以與active caspase enzyme做不可逆的共價鍵結。當FLICA probes 自由通透細胞膜，進到細胞質後，它的胜肽序列可以與相對應的 active caspase enzymes 交互作用，且做共價鍵結，留在細胞內。若細胞內沒有active caspase enzymes，螢光FLICA probes就會被沖洗掉，因此藉由螢光顯微鏡、盤式螢光reader或流式細胞儀，細胞凋亡的細胞可以用綠螢光 (FAM或660 Dye) 或紅螢光 (SR) 被偵測到，而細胞核可以用Hoechst 33342 染色 (包括在FLICA kits內)來標示。

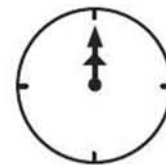
產品特點

- ✓ 早期細胞凋亡的指標
- ✓ 偵測poly caspases 或 individual caspase活性
- ✓ 螢光標定具高靈敏度
- ✓ 可區別necrosis與apoptosis
- ✓ 完整活細胞分析

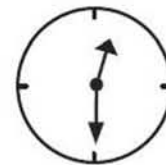


產品操作流程

PROTOCOL OVERVIEW



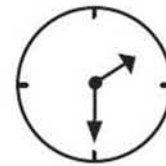
1. Reconstitute FLICA[®] with 50 μ L DMSO.



2. Dilute wash buffer 1:10 with diH₂O.



3. Further dilute FLICA[®] with 200 μ L PBS.



4. Add 5-10 μ L FLICA[®] to each sample (~300 μ L aliquot of cultured cells).

5. Incubate 15-60 minutes.

6. Remove media.

7. Wash cells: add wash buffer and spin cells (twice); or add fresh media and incubate 30 minutes (twice).

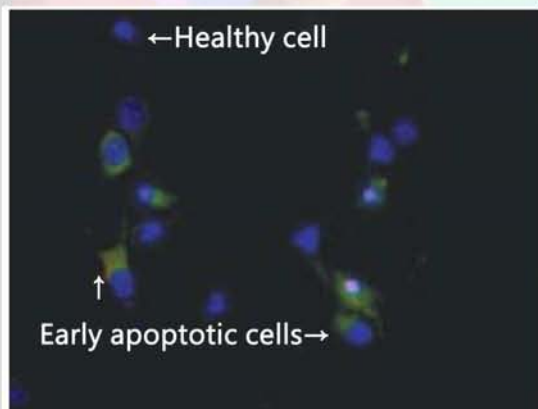
8. If desired, label with additional stains, such as Hoechst, Propidium Iodide, 7-AAD, or an antibody.

9. If desired, fix or embed cells.

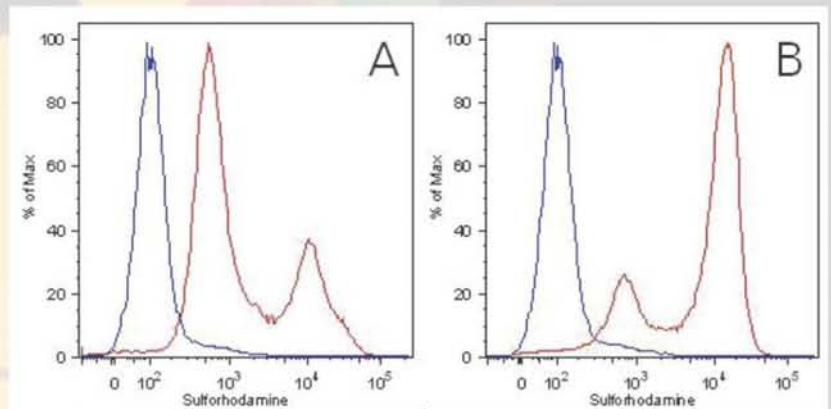
10. Analyze with a fluorescence microscope, plate reader, or flow cytometer.

Apoptosis Inducer	Cat. No. and Size	Note
Camptothecin	6208 (25mg), 6209 (100mg), 6210 (250mg)	It is a prototypic DNA topoisomerase I inhibitor
Staurosporine	6212 (1mg)	It induces DNA fragmentation and apoptosis
Granzyme B	6211 (5000U)	It is a component of the cytolytic granules of cytotoxic T lymphocytes and natural killer cells
TNF-alpha	6213 (100 μ g)	It is purified from recombinant E. Coli as a single, non-glycosylated peptide containing 158 amino acids with a MW of 17.5 kDa.
TNF-beta	6214 (20 μ g)	It is purified from recombinant E. Coli as a single, non-glycosylated peptide containing 171 amino acids with a MW of 18.6 kDa.
TRAIL	6215 (100ug)	It is a protein that functions as a ligand to induce the process of apoptosis by binding death receptors DR4 and DR5.

Caspase Target	Fluorescent Label	Caspase Detection Kit	Catalog Numbers
Poly Caspases; apoptosis	FAM (green)	FAM-FLICA Poly Caspase assay kit	91 (25 tests); 92 (100 tests)
	SR (red)	SR-FLICA Poly Caspase assay kit	916 (25 tests); 917 (100 tests)
	660 Dye (far-red)	FLICA 660 Poly Caspase assay kit	9120 (25-50 tests)
Caspase 1 (ICE); pyroptosis, inflammation	FAM (green)	FAM-FLICA Caspase 1 assay kit	97 (25 tests); 98 (100 tests)
	660 Dye (far-red)	FLICA 660 Caspase 1 assay kit	9122 (25-50 tests)
Caspase 2; regulator	FAM (green)	FAM-FLICA Caspase 2 assay kit	918 (25 tests); 919 (100 tests)
Caspase 3/7; effectors, apoptosis (DEVD-ases)	FAM (green)	FAM-FLICA Caspase 3/7 assay kit	93 (25 tests); 94 (100 tests)
Caspase 6; effector, apoptosis	FAM (green)	FAM-FLICA Caspase 6 assay kit	95 (25 tests); 96 (100 tests)
Caspase 8; initiator, extrinsic apoptosis pathway	FAM (green)	FAM-FLICA Caspase 8 assay kit	99 (25 tests); 910 (100 tests)
Caspase 9; initiator, intrinsic apoptosis pathway	FAM (green) SR (red)	FAM-FLICA Caspase 9 assay kit	912 (25 tests); 913 (100 tests)
		SR-FLICA Caspase 9 assay kit	960 (25 tests); 961 (100 tests)
Caspase 10; initiator, extrinsic apoptosis pathway	FAM (green)	FAM-FLICA Caspase 10 assay kit	922 (25 tests); 923 (100 tests)
Caspase 13; effector, apoptosis	FAM (green)	FAM-FLICA Caspase 13 assay kit	929 (25 tests); 930 (100 tests)



Apoptosis in primary rat hippocampal neurons



Mouse EL4 thymoma cells were treated without (A) or with (B) 100ug mitomycin for 18 hours. Blue line: unstained control; Red line: SR-DEVD-FMK inhibitor probe to detect active caspases 3&7.

套組的內容物

FAM-FLICA green caspase detection系列 : reagent, fixative, wash buffer, Hoechst and PI
 SR-FLICA red caspase detection系列 : reagent, fixative, wash buffer, and Hoechst
 FLICA 660 far-red caspase detection系列 : reagent, fixative, wash buffer