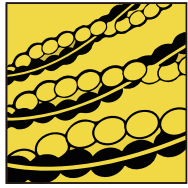
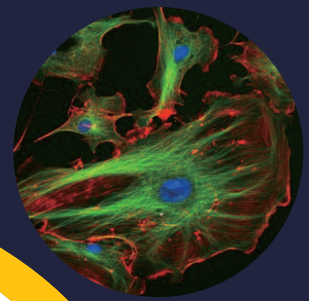


細胞骨架專家

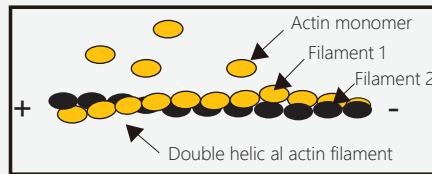


Actin介紹

Actin為43 kDa大小的蛋白質，主要由 α -actin, β -actin和 γ -actin組成。Actin的氨基酸 (aa) 有 90%- 98%是相似的，不一樣在於末端氨基酸30個殘基中。

G-actin 聚合形成 F-actin

Globular-actin (G-actin) 聚合，形成Filamentous-actin (F-actin)，並且伴隨ATP的水解。F-actin為雙螺旋長絲，兩端分別為+端polymer和-端depolymer。

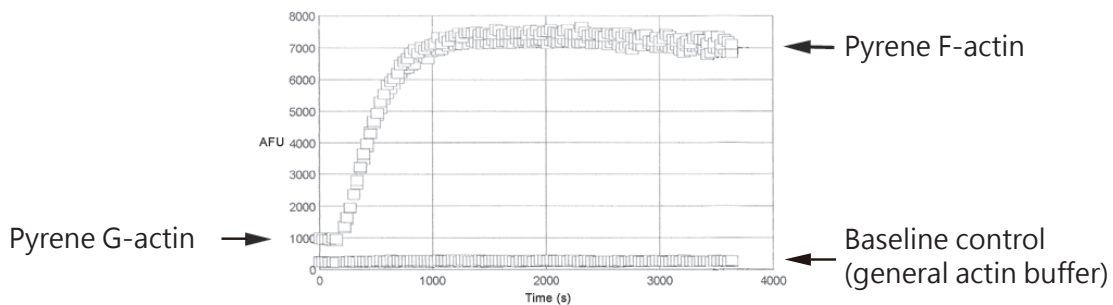


Double-helical structure of actin filaments.

01 Pyrene actin fluorescence

(CAT# BK003)

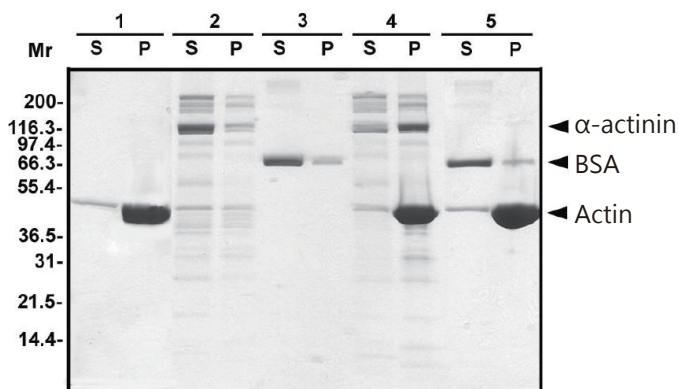
最靈敏、常用的方法。將樣本與pyrene-Actin (cat. # AP05) 混合後，利用螢光分光光度計，在350 或 360 nm觀察actin polymerization/depolymerization定量和定性的反應。通過螢光結合的形式，訊號增強7倍。



02 Spin-down assays

(CAT# BK001, CAT# BK013)

此方法是利用沉降的差異將F-actin 和G-actin分離，進而偵測是否有預測的蛋白質與F-actin或G-actin結合。



F-Actin Binding Assay:

- 1, F-actin alone
- 2, α -actinin alone. (positive control)
- 3, BSA alone. (negative control)
- 4, α -actinin and F-actin
- 5, BSA and F-actin

在4 P的pellet中F-actin filaments有超過70%的actin binding protein (α -actinin)



Actin Products



Acti-stain™ Fluorescent Phalloidins

Product Description	Cat #
Acti-stain 488 phalloidin	PHDG1
HOT *Acti-stain 555 phalloidin	PHDH1
Acti-stain 670 phalloidin	PHDN1
Rhodamine Phalloidin	PHDR1

Antibodies

Product Description	Cat #
Anti-pan actin: rabbit polyclonal	AAN01
Anti-profilin: rabbit polyclonal	APUF01

Binding Proteins

Product Description	Cat #
Acti-stain 488 phalloidin	PHDG1
Acti-stain 555 phalloidin	PHDH1
Acti-stain 670 phalloidin	PHDN1
Actin Binding Protein Spin-Down Assay Biochem Kit: rabbit skeletal muscle actin	BK001
Actin Polymerization Biochem Kit (fluorescence format): rabbit skeletal muscle actin	BK003
HOT *Actin protein (>95% pure): rabbit skeletal muscle	AKL95
Actin protein (>99% pure): bovine cardiac muscle	AD99
Actin protein (>99% pure): chicken gizzard muscle	AS99
Actin protein (>99% pure): rabbit skeletal muscle	AKL99
Actin protein (pre-formed filaments): rabbit skeletal muscle	AKF99
Actin protein (pyrene labeled): rabbit skeletal muscle	AP05
Actin protein (rhodamine): human platelet	APHR
Actin protein (rhodamine): rabbit skeletal muscle	AR05
Alpha-actinin protein: rabbit skeletal muscle	AT01
Arp2/3 protein complex: porcine brain	RP01P
Cofilin 1 protein: human recombinant	CF01
Gelsolin protein: Homo sapiens recombinant	HPG6
Heavy meromyosin protein	MH01
Heavy Meromyosin Protein (HMM Fragment)	CS-MH03
Myosin - cardiac S1 fragment	CS-MYS03
Myosin - skeletal muscle S1 fragment	CS-MYS04
Myosin - smooth muscle S1 fragment	CS-MYS05
Myosin II protein: rabbit skeletal muscle	MY02
Myosin protein: bovine cardiac muscle	MY03
Profilin 1 protein: Untagged, human recombinant	PR02
Rhodamine Phalloidin	PHDR1
SiR-Actin Kit	CY-SC001
SiR700-Actin Kit	CY-SC013
WASP protein VCA domain: GST tagged: human	VCG03

Drugs and Buffers

Product Description	Cat #
Acti-stain 488 phalloidin	PHDG1
Acti-stain 555 phalloidin	PHDH1
Acti-stain 670 phalloidin	PHDN1
Actin polymerization buffer: 10x stock	BSA02
ATP: 100mM stock	BSA04
General actin buffer: 1x stock	BSA01
Rhodamine Phalloidin	PHDR1

* Kits

Product Description	Cat #
Actin Binding Protein Spin-Down Assay Biochem Kit: human platelet actin	BK013
Actin Binding Protein Spin-Down Assay Biochem Kit: rabbit skeletal muscle actin	BK001
Actin Polymerization Biochem Kit (fluorescence format): rabbit skeletal muscle actin	BK003
F-actin Visualization Biochem Kit (fluorescence format)	BK005
G-Actin/F-actin In Vivo Assay Biochem Kit	BK037

Live Cell Imaging

Product Description	Cat #
Actin protein (biotin): skeletal muscle	AB07
Actin protein (rhodamine): human platelet	APHR
Actin protein (rhodamine): rabbit skeletal muscle	AR05
Cytoskeleton Kit (SiR-Actin and SiR-Tubulin)	CY-SC006
SiR-Actin Kit	CY-SC001
SiR700-Actin Kit	CY-SC013

Actin Oxidation Tools

Product Description	Cat #
Actin protein (>95% pure): rabbit skeletal muscle	AKL95
Actin protein (pyrene labeled): rabbit skeletal muscle	AP05

Proteins

Product Description	Cat #
Actin protein (>95% pure): rabbit skeletal muscle	AKL95
Actin protein (>99% pure): bovine cardiac muscle	AD99
Actin protein (>99% pure): chicken gizzard muscle	AS99
HOT *Actin protein (>99% pure): human platelet	APHL99
Actin protein (>99% pure): rabbit skeletal muscle	AKL99
Actin protein (biotin): skeletal muscle	AB07
Actin protein (pre-formed filaments): rabbit skeletal muscle	AKF99
Actin protein (pyrene labeled): rabbit skeletal muscle	AP05
Actin protein (rhodamine): human platelet	APHR
Actin protein (rhodamine): rabbit skeletal muscle	AR05