

Actin, Pyrene labeled, Rabbit Muscle

CATALOG NO:	M1319-500	500 µg (2 X 250 µg)
	M1319-1000	1 mg (4 X 250 µg)
ALTERNATE NAMES:	alpha skeletal muscle, Alpha-actin-1, ACT1, ACTA	
SOURCE:	Rabbit muscle	
PURITY:	> 98% by SDS-PAGE	
MOL. WEIGHT:	42.8 kDa	
LABELING EFFICIENCY:	> 65%	
FORM:	Lyophilized	
RECONSTITUTION:	Reconstitute in H ₂ O to 10 mg/ml. Freeze tubes immediately by flash freezing and store at -70°C. Dilute to desired concentration using 5 mM Tris, pH 8, 0.2 mM CaCl ₂ , 0.2 mM ATP, and 0.5 mM DTT.	
STORAGE CONDITIONS:	Lyophilized proteins can be stored at -20°C. Stable for at least 3 months as supplied. Once reconstituted store at -70°C. Avoid repeated freeze-thaw cycles.	
DESCRIPTION:	Actin is one of the major components of cytoskeleton, highly conserved and abundant proteins in eukaryotic cells. It is present as monomeric globular protein, called G actin or as a polymer filament, F actin. It plays major role in cell division, cell motility, cell signaling, organelle movement etc. Mammals have 6 isoforms of Actin, which can be divided into 3 classes, α, β and γ. Muscle Actin is of α class and all other non muscle actin fall in β and γ -class.	
APPLICATION:	Pyrene labeled actin can be used to study the effect of modulators of actin polymerization and depolymerization. On polymerization an increase in fluorescence was observed in pyrene labeled actin (Ex/Em: 365/410 nm). Assay was performed using BioVision's Actin Polymerization and Depolymerization Assay kit (Cat. No. K457-100).	
	Note: To get monomeric G actin, dilute actin to 0.4 mg/ml and keep it on ice for 1 hour.	
FLUORESCENCE CHANGE:	The net change of fluorescence signal for 20 µl of 0.5 mg/ml pyrene labelled actin on polymerization in 1 hour in 100 µl volume will be ≥ 400 RFU. Ratio of total fluorescence change of polymerized Actin to un-polymerized Actin will be at least 3:1.	

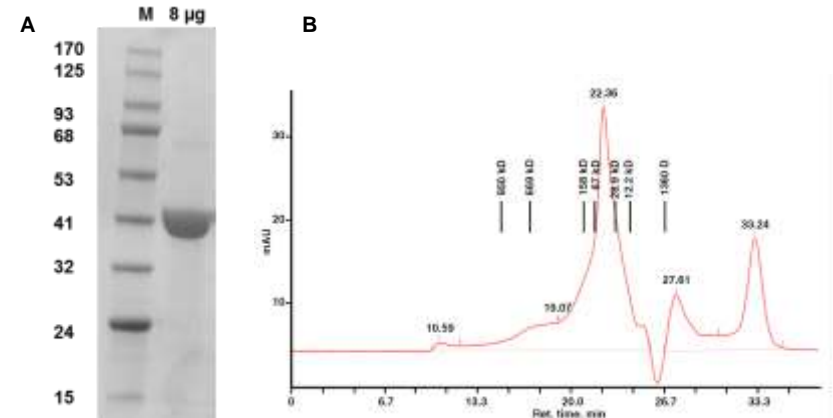


Fig A. SDS-PAGE (4-20%) of Actin: Recombinant Actin loaded under reducing conditions and stained with Coomassie Blue.

Fig B. SEC analysis of Actin : SEC analysis of Actin using a Superose 6 Increase™ 5x150 column 50 mM sodium phosphate; 0.3 M NaCl pH 7.2 at 100 µl/min

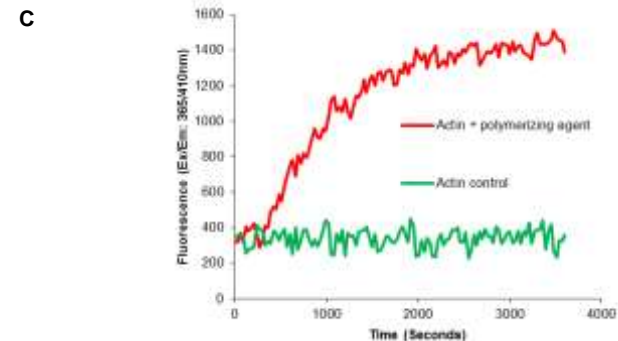


Fig C. Actin polymerization assay: Increase in fluorescence was observed in pyrene labeled actin on polymerization as measured by BioVision's Actin Polymerization and Depolymerization Assay kit (Cat. No. K457-100)

RELATED PRODUCTS:

- Anti-Beta Actin Antibody (4F7) (Cat. No. A1301)
- Anti-ACTA2 Rabbit Monoclonal Antibody (Cat. No. A1118)
- Anti-ACTC1 Antibody (Cat. No. A1411)

FOR RESEARCH USE ONLY! Not to be used on humans.