
Product Information Sheet

Ordering Information

Product Number:	5303
Product Name:	Phalloidin-PEG4-DBCO
Unit Size:	100 ug
Storage Conditions:	Freeze (<-15 °C), Minimize light exposure
Expiration Date:	12 months upon receiving

Chemical and Spectral Properties

Appearance:	Solid
Molecular Weight:	1366.55
Soluble In:	DMSO
Excitation Wavelength:	N/A
Emission Wavelength:	N/A

Application Notes

Phalloidin, a bicyclic heptapeptide toxin, binds specifically at the interface between F-actin subunits, locking adjacent subunits together. Phalloidin binds to actin filaments much more tightly than to actin monomers, leading to a decrease in the rate constant for the dissociation of actin subunits from filament ends, essentially stabilizing actin filaments through the prevention of filament depolymerization. Moreover, phalloidin is found to inhibit the ATP hydrolysis activity of F-actin. Thus, phalloidin traps actin monomers in a conformation distinct from G-actin and it stabilizes the structure of F-actin by greatly reducing the rate constant for monomer dissociation, an event associated with the trapping of ADP. Phalloidin functions differently at various concentrations in cells. When introduced into the cytoplasm at low concentrations, phalloidin recruits the less polymerized forms of cytoplasmic actin as well as filamin into stable "islands" of aggregated actin polymers, yet it does not interfere with stress fibers, i.e. thick bundles of microfilaments. The property of phalloidin is a useful tool for investigating the distribution of F-actin in cells by labeling phalloidin with fluorescent analogs and using them to stain actin filaments for light microscopy. Fluorescent derivatives of phalloidin have turned out to be enormously useful in localizing actin filaments in living or fixed cells as well as for visualizing individual actin filaments in vitro. Fluorescent phalloidin derivatives have been used as an important tool in the study of actin networks at high resolution. AAT Bioquest offers a variety of fluorescent phalloidin derivatives with different colors for multicolor imaging applications. Phalloidin-PEG4-DBCO can be readily used for conjugations with azido-containing molecules.