Flash Phalloidin™ Green 488

Catalog# / Size	424201 / 300 units
Regulatory Status	RUO
Other Names	Phalloidin
Description	Molecular Mass 1582.65 g/mol-1. Flash Phalloidin™ Green 488 excites maximally at 488 nm and emits maximally at 520 nm. Phalloidin is a bicyclic peptide that can be found naturally in the death cap mushroom. This molecule is considered to bind so tightly to F-actin that when ingested by an organism, it will prevent the depolymerization of the actin polymeric filaments which leads to cellular toxicity. In cell imaging, this is a very useful probe for imaging and stabilizing filamentous F-actin in fixed and permeabilized cells, providing structural and volumetric context to the cell. Phallotoxins are conjugated to a wide array of fluorophores to enable their use in multicolor microscopy.

Product Details

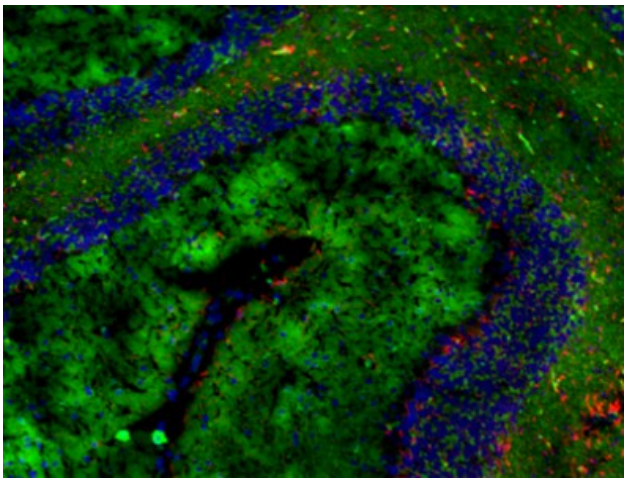
Verified Reactivity	Human, Mouse, Rat, All Species
Preparation	Flash Phalloidin™ Green 488 is lyophilized. Reconstitute with 1.5mL of methanol to make a stock solution of 300 units.
Storage & Handling	Store Flash Phalloidin™ Green 488 at -20°C, protected from light.
Application	ICC - Quality tested IHC-F - Verified
Recommended Usage	Reconstitute the Flash Phalloidin™ Green 488 with 1.5mL of methanol to make 300 units. Then prepare a working concentration by diluting 1:20 - 1:100 of stock in 1X PBS. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	1. Prior to reconstitution, spin down the vial of lyophilized reagent in a microcentrofuge to ensure the reagent is at the bottom of the vial. 2. Fix cultured cells with 1% - 4% paraformaldehyde (PFA) for 10 minutes at room temperature. 3. Wash the cells two times with 1X PBS. 4. Permeabilize the cells with 0.5% Triton X-100 for 10 minutes at room temperature or at 4°C. 5. Wash the cells two times with 1X PBS. 6. Block cells with 5% fetal bovine serum for 30 minutes at room temperature. 7. Prepare the working solution by diluting Flash Phalloidin™ Green 488 1:20 - 1:100 in 1X PBS. 8. Stain the cells with diluted solution for 20 minutes at room temperature in the dark protected from light. 9. Mount the slides with an antifade mounting media and image the slides.
Product Citations	1. Cyr A, *et al.* 2019. Oxid Med Cell Longev. 2019:4745067. PubMed 2. Zoetemelk M, *et al.* 2020. Mol Oncol. 2.593055556. PubMed

Antigen Details

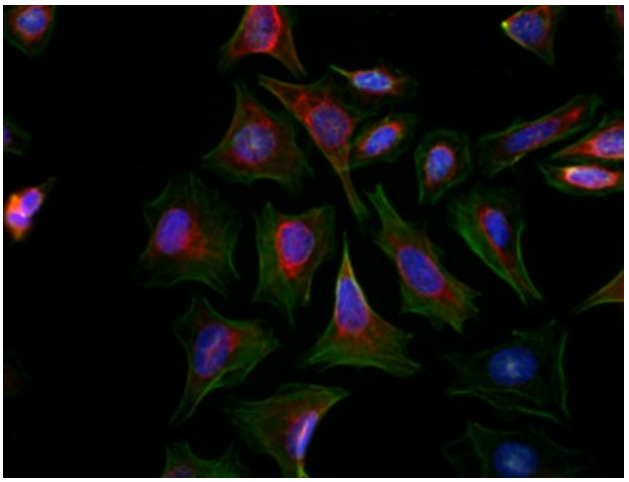
Distribution	Cytoskeleton.
Biology Area	Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience
Gene ID	NA

Product Data

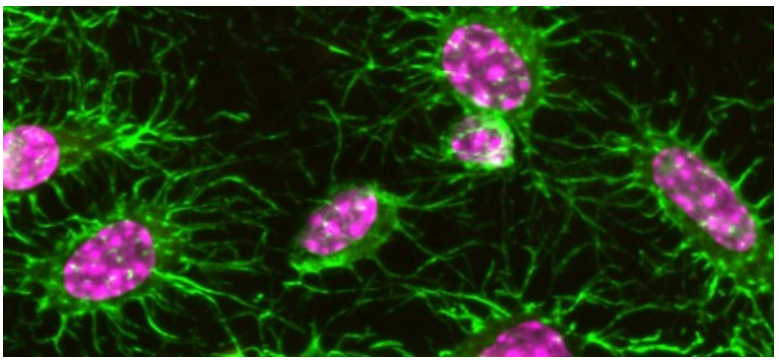
Drosophila ovaries were fixed with paraformaldehyde, incubated with Flash Phalloidin™ Green 488 (green) to visualize F-actin and mounted in VECTASHIELD containing DAPI (red) to visualize the nucleus. Image was then collected using a Leica TCS SP5 II (Leica Microsystems) confocal microscope. Image provided courtesy of Dr. Eurico Morais-de-Sá at the Instituto de Investigação e Inovação em Saúde, Portugal.



C57BL/6 mouse frozen cerebellum section was fixed with 4% paraformaldehyde (PFA) for ten minutes at room temperature then permeabilized with 0.5% Triton X-100 for ten minutes and blocked with 5% FBS for one hour at room temperature. Then the section was stained with 5 µg/mL anti-GFAP (clone 2E1.E9) Alexa Fluor® 647 (red) at 4°C overnight. The following day the section was stained with Flash Phalloidin™ Green 488 (green, 25 µL of the stock solution



HeLa cells were fixed with 1% paraformaldehyde (PFA) for ten minutes then permeabilized with 0.5% Triton X-100 for ten minutes and blocked by 5% FBS for 30 minutes. Then, the cells were stained with anti-Cytokeratin Alexa Fluor® 647 (red) at 4°C overnight. The following day, the cells were stained with Flash Phalloidin™ Green 488 (green, 25 µL of the stock solution in 1 mL of PBS) for 30 minutes at 4°C in the dark. The nuclei were then counterstained with DAPI (blue). The image was captured by 40X objective.



Frozen bone marrow sections with osteoclasts expressing tdTomato (yellow) were stained with Flash Phalloidin™ Green 488 (green) and counterstained with DAPI (pink). Image generously submitted to the 2017 Cell Life Imaging Competition by Andres Garcia-Garcia from University of Cambridge.

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587