

LipidSpot™ Lipid Droplet Stains

LipidSpot™ dyes rapidly stain lipid droplets in live cells or fixed cells, with no wash step required. Available with green or red/far-red fluorescence.



Product Description

LipidSpot™ stains are fluorescent dyes that rapidly stain lipid droplets in live or fixed cells, with no wash step and minimal background.

- Rapidly and specifically stain lipid droplets
- Minimal background, no wash required
- Stain live or fixed cells, or fix and permeabilize after staining
- Suitable for staining 3D cell spheroids
- Available with green or red/far-red fluorescence
- LipidSpot™ 488 validated in super-resolution imaging by SIM
- Supplied at 1000X in DMSO

Intracellular lipid droplets are cytoplasmic organelles involved in the storage and regulation of triglycerides and cholesterol esters. LipidSpot™ dyes are fluorogenic neutral lipid stains that rapidly accumulate in lipid droplets, where they become brightly fluorescent. The dyes can be used to stain lipid droplets in both live and fixed cells, with no wash step required. Cells also can be fixed and permeabilized after staining. LipidSpot™ stains show minimal background staining of cellular membranes or other organelles, unlike traditional dyes like Nile Red.

Find the Right Stain for Your Application

LipidSpot™ 488 has excitation around 430 nm, and can be excited equally well at 405 nm or 488 nm. In cells, it stains lipid droplets with bright green fluorescence detectable in the FITC channel. LipidSpot™ 488 has been validated in super-resolution imaging by SIM (Ref. 3), and for staining of 3-D cell spheroids (Ref. 7).

LipidSpot™ 610 has excitation/emission at ~592/638 nm in cells; it is optimally detected in the Texas Red® channel, but is also bright in the Cy®3 and far-red Cy®5 channels. Therefore, we don't recommend pairing LipidSpot™ 610 with other red or far-red probes.

In yeast, LipidSpot™ 488 stains intracellular membranes, but LipidSpot™ 610 does not. In bacteria, both LipidSpot™ dyes can stain gram-positive but not gram-negative strains. See our [Cellular Stains Table](#) for more information on how our dyes stain various organisms.

LipidSpot™ Lipid Droplet Stains

LipidSpot™ Stain	Abs/Em	Detection channel	Catalog no.	Size (1000X in DMSO)
LipidSpot™ 488	427/585 nm (in vegetable oil or cells)	FITC, GFP	70065-T	20 uL
70065	125 uL			
LipidSpot™ 610	610/663 nm (in vegetable oil) ~592/638 nm (in cells)	Texas Red® or Cy®5	70069-T	20 uL
70069	125 uL			

Cy Dye is a registered trademark of Cytiva; Texas Red is a registered trademark of Thermo Fisher Scientific.

This datasheet was generated on May 8, 2026 at 07:20:37 AM. Visit product page to check for updated information before use.
Product link: <https://biotium-woo.supremeclients.com/product/lipidspot-488-lipid-droplet-stain-1000x/>

Product attributes

Dye	LipidSpot™ 488, LipidSpot™ 610
Probe cellular localization	Lipid droplets
For live or fixed cells	For fixed cells, For live/intact cells
Assay type/options	No-wash staining, Real-time imaging
Cell permeability	Membrane permeant
Fixation options	Fix before staining (formaldehyde), Fix after staining (formaldehyde), Permeabilize after staining
Colors	Green, Far-red
Concentration	1000X in DMSO
Excitation/Emission	LipidSpot™ 488: 427/585 nm (in vegetable oil or cells), LipidSpot™ 610: 610/663 nm (in vegetable oil); ~592/638 nm (in cells)
Storage Conditions	Store at 2 to 8 °C, Protect from light