Light-on LysoView™ 555

Light-On LysoView™ 555 is a red fluorogenic lysosome dye with pH-dependent fluorescence. Light-On LysoView™ dye is unique among commercially available lysosomotropic dyes in that its fluorescence in cells is activated by exposure to UV excitation.

Product attributes

Probe cellular localization	Lysosomes
For live or fixed cells	For live/intact cells
Assay type/options	Long term staining (24-72h), No-wash staining, Real-time imaging
Cell permeability	Membrane permeant
Colors	Red
Excitation/Emission	554/583 nm

Product Description

Light-On LysoView™ 555 is a red fluorogenic lysosome dye with pH-dependent fluorescence. Light-On LysoView™ dye is unique among commercially available lysosomotropic dyes in that its fluorescence in cells is activated by exposure to UV excitation. In solution, the dye shows pH-dependent fluorescence that does not require UV activation. In cells, the dye initially shows low fluorescence, but brief exposure to UV excitation from a mercury arc lamp through a DAPI filter activates bright red fluorescence localizing to lysosomes.

We hypothesize that the dye assumes a non-fluorescent structure that can be switched to a fluorescent structure by UV excitation. Mercury arc lamp excitation of the dye using other filter sets (FITC, rhodamine) or dye excitation with a 405 nm laser does not activate fluorescence. Lysosomal fluorescence fades several minutes after UV exposure, but can be re-activated in the same cells multiple times by exposure to UV light . Therefore the dye provides a novel tool for UV-activated, reversible fluorescence imaging of lysosomes. See the product protocol for more information.

Also see our red fluorescent LysoView™ 540, and far-red fluorescent LysoView™ 633 lysosome stains, which do not require UV activation.