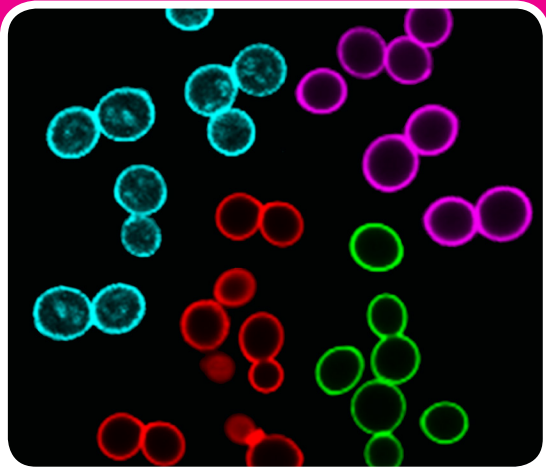


Yeast stains

Fluorescent dyes and kits



Nuclear stains

Dyes for nuclear staining of live or fixed yeast.

- Thiazole Orange: A fixable green dye with predominantly nuclear localization (Fig. 7). Staining pattern becomes diffuse after fixation.
- NucSpot® 470: A green DNA binding dye that stains the nucleus of dead or fixed and permeabilized yeast.

Cell periphery stains

Dyes that label the yeast cell periphery, in a large choice of colors and binding mechanisms.

- CellBrite™ Fix: Fixable, amine-reactive membrane dyes.
- MemBrite™ Fix: Fixable, covalent staining of cell surface proteins.
- Wheat Germ Agglutinin (WGA): A lectin with high affinity for sialic acid and N-acetylglucosamine, strongly stains bud scars in budding yeast (Fig. 6).
- Concanavalin A (ConA): A lectin that binds to α-mannopyranosyl and α-glucopyranosyl residues found in the cell wall of yeast and fungi (Fig. 6).
- Calcofluor White: A classic blue dye that binds to cellulose and chitin in the cell walls of yeast (Fig. 5), fungi, algae and plants.

Organelle stains

Dyes validated in *S. cerevisiae* yeast.

- MitoView™ 633: membrane potential-dependent mitochondrial dye.
- LysoView™ 633, LysoView™ 540 and Light-On LysoView™ 555: accumulate in the yeast vacuole.
- Phalloidin: Stains F-actin cables and patches in fixed and permeabilized yeast (Fig. 8).

Viability dyes and kits

Dyes to distinguish live from dead cells, or identify cells that are metabolically active.

- Live-or-Dye™ Fixable Viability Staining Kits: Fixable and dead-cell-specific. Good for flow cytometry and microscopy. Available in 9 bright, photostable colors. Note: the NucFix™ Red variation is not nucleus-specific in yeast.
- ViaVac™ Red/Green: A vacuolar cell vitality dye. Passively diffuses into cells and gives a nonspecific green staining pattern. In metabolically active yeast, the dye is actively transported into the vacuole where it stains intravacuolar tubules red.

Combination Staining Kits

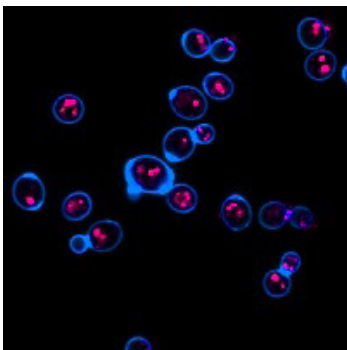


Figure 1. Yeast Vitality Staining Kit, ViaVac™ Red/Green (red) and Calcofluor White (blue).

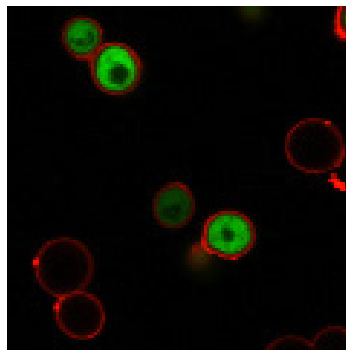


Figure 2. Yeast Viability Staining Kit, CF@594 ConA (red) and Live-or-Dye™ 488-515 (green).

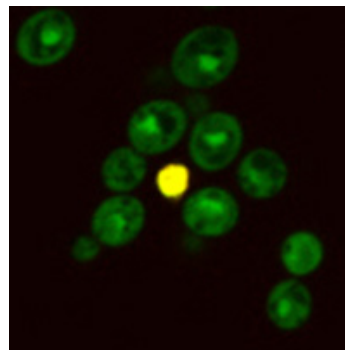


Figure 3. Yeast Fixable Live/Dead Staining Kit, Thiazole Orange (green) and Live-or-Dye™ 568/583 (red).

PMA for Viability PCR

Viability PCR is a fast, quantitative alternative to culture methods for determining cell viability. PMA is a photoactivatable dye that selectively inactivates DNA in dead cells, allowing selective amplification and quantitation of live cell DNA (Fig. 4).

Figure 4. Viability qPCR of live or heat-killed yeast, *S. cerevisiae*. Live cells +/- 200 μ M PMA (blue), untreated dead cells (green), dead cells treated with PMA (red).

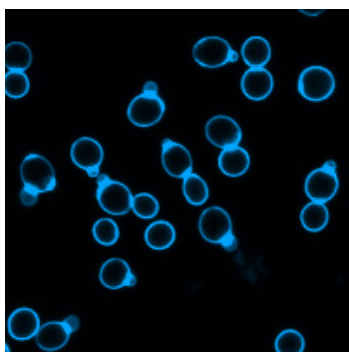
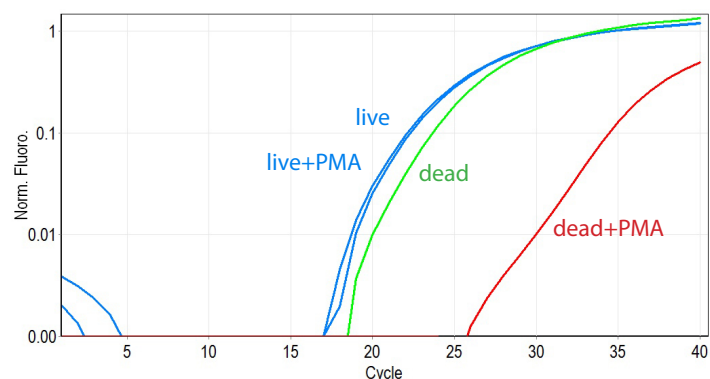


Figure 5. *S. cerevisiae* stained with Calcofluor White.

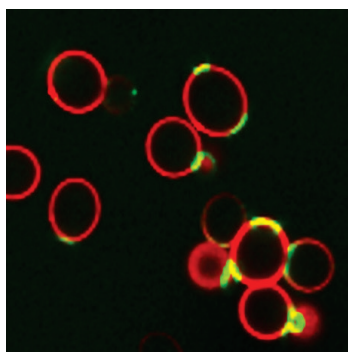


Figure 6. *S. cerevisiae* stained with CF@594-ConA (red) and CF@488A-WGA (green).

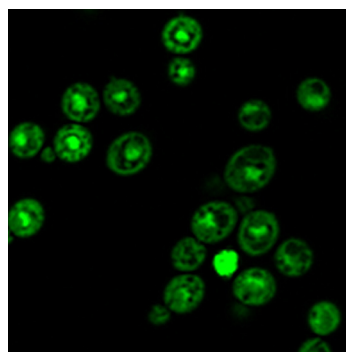


Figure 7. *S. cerevisiae* stained with Thiazole Orange.

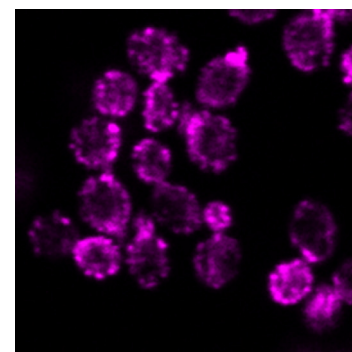


Figure 8. Fixed and permeabilized *S. cerevisiae* stained with CF@640R conjugated phalloidin.

Ordering Information

Cat. #	Product	Description
32002-32009	Live-or-Dye™ Fixable Viability Kits	Dead cell specific stains in a variety of colors
29068	ViaVac™ Red/Green, 10 mM in DMSO	Yeast vital dye
31062	Yeast Vitality Staining Kit	ViaVac Red/Green and Calcofluor White
31063	Yeast Viability Staining Kit	CF@ Dye-ConA and Live-or-Dye™ combinations
31064	Yeast Fixable Live/Dead Staining Kit	Thiazole Orange and Live-or-Dye™ 568/583
40019	PMA dye, 20 mM in water	Viability determination by qPCR
00027-00055	Phalloidin Conjugates	Actin filament stain for fixed and permeabilized cells
29067	Calcofluor White, 5 mM in Water	Blue cell wall/bud scar stain
29015-29020; 29058	CF@ Dye Concanavalin A (ConA)	Cell wall stain in a variety of dye conjugates
29021-29029; 29059; 29064	CF@ Dye Wheat Germ Agglutinin (WGA)	Cell wall bud scar stain in a variety of dye conjugates
40077	Thiazole Orange, 10 mM in DMSO	Fixable green cytoplasmic/nuclear stain
30050	ViaFluor® CFSE Cell Proliferation Kit	Fixable green cytoplasmic stain
30088-30090	CellBrite™ Fix	Fluorogenic membrane dye that covalently stains the plasma membrane in live cells
30092-30104	MemBrite™ Fix	MemBrite™ Fix dyes covalently label the surface of live cells
70055	MitoView™ 633	Membrane potential-dependent mitochondrial stain
70061	LysoView™ 540	Lysosome/vacuole stain
70058	LysoView™ 633	Lysosome/vacuole stain
70060	Light-On LysoView™ 555	UV-activated lysosome/vacuole stain