

For research use only

# GlycoYELLOW™-βGal

Table 1. Product information

Catalog No.	Material	Amount	Storage	Stability
GC601	GlycoYELLOW™-βGal	50μg × 10 vials	Store under -20 °C, desiccate and protect from light Unrecommend storing DMSO solution of dye	1 year (unopened)

## 1. Introduction

### ■ About β-Galactosidase detection probe

GlycoYELLOW™-βGal is a fluorescent probe for specific detection of β-galactosidase. It can be applied to fluorescent imaging and selection of cell and tissue transfected with *lacZ*.

Because GlycoYELLOW™-βGal is almost non-fluorescent in the absence of β-galactosidase, this probe exhibits good S/N ratio.

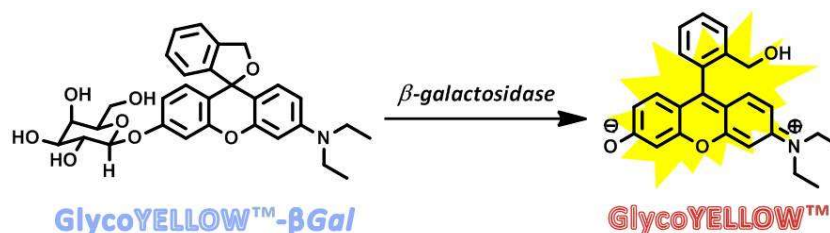


Figure 1. Mechanism of fluorescent generation of GlycoYELLOW™-βGal

### ■ GlycoYELLOW™-βGal suitable for...

- Gene analysis by fluorescent imaging.
- Monitoring transfection efficiency and live cell imaging of transfected cell.
- Study on promoter or enhancer.

## 2. Live cell staining protocol with GlycoYELLOW™-βGal

### ■ Materials Required but not Provided

- Dimethylsulfoxide (DMSO), dehydrated
- Hank's Balanced Salt Solution (HBSS)

### ■ Preparation of Reagent and Cell Staining

1. To prepare a stock solution, dissolve the GlycoYELLOW™-βGal 50 μg in 93.3 μL of DMSO to 1 mM.
2. Dilute an aliquot of stock solution with HBSS to a final concentration of 5 μM (staining solution).
3. Remove the culture medium from cell culture dish and wash with loading medium.

Caution : Glass bottom dish etc. are recommended as cell culture dish, because it shows a low autofluorescence.

4. Add stain solution to the dish and incubate for 30 minutes at 37 °C, 5 % CO<sub>2</sub>.
5. After staining, remove the stain solution from the dish and wash 2 or 3 times with HBSS. Replace to HBSS buffer and observe the fluorescence using a fluorescence microscopy.

### ■ Fluorescence Imaging

488 or 514 nm is suited for excitation wavelength. B-2A, FITC, Cy3 (Nikon Co. Ltd.) or U-FBWA, U-FBNA, U-FGW, U-FGWA (Olympus Co. Ltd. ) etc. are usable. The wavelength of maximum emission is around 547 nm.

Table 2. Fluorescence property of GlycoYELLOW™-βGal

	Abs max	Flu max
GlycoYELLOW™-βGal	525 nm *	547 nm

\* Excitation by 488nm laser is also possible.

### ■ Reference

1. Mako Kamiya, Daisuke Asanuma, Erina Kuranaga, Asuka Takeishi, Masayo Sakabe, Masayuki Miura, Tetsuo Nagano, and Yasuteru Urano *J. Am. Chem. Soc.* 2011, 133, 12960-12963

\*GlycoYELLOW™-βGal indicates HMDER-βGal in the paper.