β-Galactosidase Assay Kit

Cat. No. Kit-0857 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	By coupling the β-Gal assay to the highly sensitive luciferase enzyme lacZ activity can be measured quickly and easy down to extremely low levels of expression. The most sensitive lacZ method available.One of the most common reporter genes used in molecular biology applications is the E. coli lacZ gene that codes for an active subunit of β-galactosidase in vivo. Since this enzyme is generally absent in normal mammalian, yeast, some bacterial and even plant cells, it can be detected at very low levels. The enzyme also has a wide substrate specificity that allows monitoring of lacZ expression (and therefore co-expressed genes or promoter efficiency) routinely, to the point of detection of as few as 5 copies of β-galactosidase per cell by FACS analysis. Although chromogenic assays of β-galactosidase activity (i.e. X-Gal) have found extensive use as do the application of the fluorogenic substrates (for example FDG) detection of lacZ activity using luminescence can give even greater levels of sensitivity. By coupling the -Gal assay to the highly sensitive luciferase enzyme lacZ activity can be measured quickly and easy down to extremely low levels of expression. The sensitive Glo-GalTM substrate is cleaved first by the β-galactosidase enzyme and then in the presence of ATP luciferase acts to produce the light output. The luciferase enzyme provided in the kit has been genetically engineered to produce a red light emission (max = 619 nm). This property allows the use of this kit with other luciferases, producing, for example, green emission wavelengths.
Size	1 kit
Description	Although chromogenic assays of β-galactosidase activity (i.e. X-Gal) have found extensive use as do the application of the fluorogenic substrates (for example FDG)

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	detection of lacZ activity using luminescence can give even greater levels of sensitivity. The sensitive Glo-Gal substrate is cleaved first by the β-galactosidase enzyme and then in the presence of ATP luciferase acts to produce red light output.
Storage	Reconstituted substrates should be handled with care, kept cold (ice-bath) when not in use, and stored frozen (-20°C), long term storage of reconstituted substrate is not suggested. In case of contact with skin or eyes wash thoroughly with soap and cold water. Reagents should be Stable for at least 6 months following purchase. Use in drug or manufacturing processes is strictly prohibited. Please contact us for information on use or licensing.
Kit Components	A.) Cell Lysis Buffer. 2 x 10mlB.) Reaction Buffer. 2 x 10mlC.) Glo-GalTM Substrate. 2 x 15mgD.) RubyGlowTM Red Luciferase. 2 x 0.5mgREAGENTS-QUANTITY-STORAGECell Lysis Buffer: 2 x 10mL; C; Reaction Buffer: 2 x 10mL; C, R; Glo-GalTM Substrate: 2 x 15mg; F, R; RubyGlowTM Red Luciferase: 2 x 0.5mg; F, R;Notes: F=store at or below -20°C; RT=store at room temperature; C=store cold (4°C); L=light sensitive; FL=flammable; R=read protocol instructions carefully prior to use.

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