

Reagents for Antibody Detection

Antibody Modification

Fluorescence Marker Kit 550

92813 BioChemika 1 kit
2-8°C
◆
NEW
For fluorescent labelling of proteins, peptides, and amino-modified nucleotides. Comprises phosphate buffer solution, bicarbonate buffer solution, and Fluorescent Orange 548 reactive.
Sufficient for 5 reactions labelling 1.5 mg of protein each. This kit provides the required reagents for labelling proteins with Fluorescent orange 548. This label shows similar properties as Cy[®] 3. This means among others bright fluorescence, spectral match with corresponding laser line, good water solubility. Together with Fluorescent red 646 it is ideally suited for energy transfer studies, hybridization assays and flow cytometry.
® Registered Trademark of Amersham Biosciences Limited

Fluorescence Marker Kit 650

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Fluorescein isothiocyanate isomer I

F 7250 (Fluorescein 5-isothiocyanate; FITC) 50 mg
2-8°C
CAS No. 3326-32-7 100 mg
C₂₁H₁₁NO₅S FW 389.4 250 mg
suitable for protein labeling, 500 mg
minimum 90% (HPLC), powder 1 g
Fluorescence. λ_{ex} 492 nm; λ_{em} 518 nm 5 g
(green)
Color. green

References
E. Harlow and D. Lane, ed., *Antibodies: A Laboratory Manual*, Cold Spring Harbor, NY (1988), 353-355
R: 42 S: 22-24/25

StarBright[®] Green Isothiocyanate Protein Labeling Kit

MT3000 The Isothiocyanate-StarBright[®] Green 1 kit
2-8°C
◆
WET ICE
NEW
Conjugation Kit is suitable for the conjugation of proteins such as polyclonal and monoclonal antibodies for use in immunohistochemical or immunofluorescent techniques. In addition, the ITCN conjugation kit may also be used with peptide hormones, cytokines, growth factors and other proteins.

Bioassay

Kits

Alkaline Phosphatase Detection Kit

MT1000 StarBright[®] Green Substrate is a 1 kit
2-8°C
◆
WET ICE
fluorogenic substrate specific for the detection of alkaline phosphatase-conjugated secondary systems. Alkaline phosphatase (AP) cleaves the phosphate group of the non-fluorescent StarBright Green Substrate resulting in an intense fluorescent signal which has an optimal excitation wavelength of 440-450 nm and emission maximum of 505 nm. The large difference between the emission wavelength and the excitation wavelength, also known as Stoke's shift, results in lower levels of background fluorescence and higher detection sensitivity.

StarBright Green Substrate exhibits the following characteristics:

- Low molecular weight (approximately 500 daltons)
- High quantum yield
- Large Stoke's shift (55-65 nm)
- High photostability with no photobleaching
- High water solubility and reconstituted stability
- Expected detection limits of 2 x 10⁻⁷ units or 1 x 10⁻¹⁸ moles of alkaline phosphatase.

Alkaline Phosphatase Detection Kit, Fluorescence

APF The kit contains buffers, substrate and control 1 kit
-20°C
◆
WET ICE
NEW
enzyme for an easy and rapid alkaline-phosphatase reporter gene activity assay.
The assay used is fluorometric and therefore is 10 -100 more sensitive than the colorimetric measurement. It is linear over a wide range of enzyme concentrations, which makes it particularly well suited for comparative analysis.
The reporter gene, encoding for alkaline-phosphatase, offers great advantages:

- The enzyme is highly stable.
 - The assay is safe and easy to use. It provides rapid and reproducible results.
 - When using the mutated version of the human placental alkaline phosphatase (SEAP) which is secreted out of the cells, enzyme activity in the same cell sample can be measured nondestructively and repeatedly over time using an aliquot of the culture medium. This saves the time required for cell extract preparations.
- 200 µl sufficient for 300 reactions
- Components:**
4-Methylumbelliferyl phosphate disodium salt,
Fluorescent assay buffer,
Magnesium chloride solution,
Control enzyme,

Bioassay

Kits

β -Galactosidase Reporter Gene Activity Detection Kit

GAL-A The substrate used in this kit is o-nitrophenyl β -D-galactopyranoside (ONPG). ONPG generates a yellow color upon hydrolysis. 1 kit
[-20°C]

◆

DRY ICE This kit provides all components needed for detection of β -galactosidase activity by a colorimetric assay in animal cells or tissues.

1 kit sufficient for 65 tests
0.2 μ m filtered

Components:
2 \times assay buffer, 10 mL
5 \times lysis buffer, 25 mL
Control enzyme, 100 units
Detailed technical bulletin,
Stop solution, 35 mL

References
Current Protocols in Molecular Biology, New York, NY (1996), Ch. 9.6-9.7
R: 36/37/38 S: 26-36

β -Galactosidase Reporter Gene Staining Kit

GAL-S The substrate used in this kit is X-gal (5-bromo-4-chloro-3-indolyl β -D-galactopyranoside) which results in an indigo blue-colored staining of transfected cells and tissues. This test provides a method for determining the percentage of transfected cells that are expressing LacZ or for microscopically visualizing reporter gene expression in tissue sections. 1 kit
[-20°C]

◆

DRY ICE For histochemical staining of animal cells or tissues.

0.2 μ m filtered
1 kit sufficient for 100 tests (using a 3.5 cm dish)

Components:
10 \times Fixation Solution, 15 mL
10 \times PBS, 60 mL
Detailed technical bulletin,
X-Gal, 150 mg
Reagent A, 1.5 mL
Reagent B, 1.5 mL
Reagent C, 1.5 mL
R: 24/25-26-34-40-43 S: 26-36/37/39-45-51

β -Glucuronidase Fluorescent Activity Detection Kit

GUS-A The substrate used in this kit is MU-GlcA (4-methylumbelliferyl β -D-glucuronide), a widely used fluorogenic substrate for determination of glucuronidase activity. 1 kit
[-20°C]

◆

DRY ICE For quantitative assay of β -glucuronidase gene products in plant or animal cell lysates.

Features and Benefits

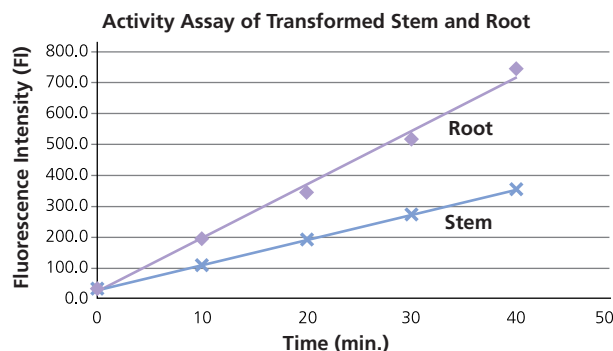
- Fluorescent detection for quantitative and qualitative measurement
- Ideally suited to plant expression studies due to very low GUS activity in plants and high enzyme stability
- GUS does not interfere with plant cell function or viability

1 kit sufficient for 200 standard tests

Components:
Detailed technical bulletin, 1 each
5 \times extraction buffer, 25 mL
 β -Glucuronidase, 1,000 units
4-MU, 25 mg
4-MU-GlcA, 25 mg
Stop solution, 100 mL

References

1. Jefferson, R.A., et al., The GUS reporter gene system. *Nature* **342**, 837-838 (1989)
2. Jefferson, R.A., et al., GUS fusions: beta-glucuronidase as a sensitive and versatile gene fusion marker in higher plants. *EMBO J.* **6**, 390-3907 (1987)
3. Kosugi, S., et al., An improved assay for beta-glucuronidase in transformed cells: methanol almost completely suppresses a putative endogenous beta-glucuronidase activity. *Plant Sci.* **70**, 133-140 (1990)
4. *Current Protocols in Molecular Biology*, New York, NY (1996), 9.6 R: 20/22-24-37/38-41 S: 53-26-36/37/39-45



Beta-glucuronidase activity in tissues of tobacco plant transformed with GUS reporter gene

β -Glucuronidase Reporter Gene Staining Kit

GUS-S The substrate used in this kit is X-GlcA (5-bromo-4-chloro-3-indolyl β -D-glucuronide) which results in an insoluble indigo-blue precipitate in transfected cells and tissues. 1 kit
[-20°C]

◆

DRY ICE The *E. coli* GUS gene is extensively used to analyze gene expression in transformed plants. Plants have low intrinsic GUS activity, and the *E. coli* gene is quite stable in plant cells. As a tag, GUS remains active at the N-terminus of fusion proteins.

Features and Benefits

- Fluorescent detection for quantitative and qualitative measurement
- Ideally suited to plant expression studies due to very low GUS activity in plants and high enzyme stability
- GUS does not interfere with plant cell function or viability

1 kit sufficient for 100 histochemical assays

Components:
Detailed technical bulletin,
2 \times Fixation buffer, 25 mL
X-GlcA, 1 vial
Reagent A, 50 mL
Reagent B, 200 μ L
Reagent C, 200 μ L

References

1. Jefferson, R.A., et al., The GUS reporter gene system. *Nature* **342**, 837 (1989)
2. Jefferson, R.A., et al., GUS fusions: beta-glucuronidase as a sensitive and versatile gene fusion marker in higher plants. *EMBO J.* **6**, 3901 (1987)

R: 45-46-23/24/25-36/37/38-40-41-42/43 S: 53-26-36/37/39-45-51

Bioassay

Kits

Luciferase Reporter Gene Detection Kit

LUC-1 Firefly luciferase is one of the most commonly utilized reporter genes for the study of gene expression. It is an extremely sensitive, rapid, and easy to use reporter gene. The chemiluminescent reaction catalyzed by luciferase is one of the most sensitive analytical tools for measuring gene expression. The luciferase substrate contains coenzyme A for increased and sustained luminescence compared to conventional methods. This eliminates the need for automated luminometer injection of substrate and allows analysis by photographic film or scintillation counting. The lysis buffer contains polymyxin B which further enhances the signal and eliminates lysozyme treatment and freeze-thawing of cells. Cell lysis buffer is compatible with β -galactosidase assays. 1 kit sufficient for 100 assays

Components:

Luciferase assay substrate,
Luciferase assay buffer,
5x Cell culture lysis reagent,

Substrates

p-Nitrophenyl Phosphate Liquid Substrate System

N 7653 (pNPP; 4-Nitrophenyl phosphate disodium salt solution) 100 mL

WET ICE CAS No. 4264-83-9

liquid

A substrate for alkaline phosphatase that yields a soluble yellow end product that may be read at 405 nm. The reaction may be stopped with 3N NaOH and read at 405 nm. Recommended for ELISA (microwell) procedures, not recommended for membrane applications.

Ready-to-use.

Stable at least one year when stored below 0 °C.

R: 23/24/25-36/37/38 S: 23-26-36/37/39-45

SIGMA FAST™ p-Nitrophenyl Phosphate Tablets

SIGMA FAST™ tablet pNPP (p-nitrophenyl phosphate) has been developed for use as a soluble substrate for the detection of alkaline phosphatase activity in Enzyme Immunoassays (EIA). pNPP is the substrate of choice in high sensitivity alkaline phosphatase-based EIA assays. EIA applications using pNPP may be read in timed assays or stopped with 3N NaOH for delayed readings. SIGMA FAST™ require only the addition of distilled or deionized water to prepare an active substrate solution.

R: 36/37/38 S: 26-36

N 2770 SIGMA FAST™ p-Nitrophenyl Phosphate Tablets 5 sets
50 sets

tablet, To prepare 20 mL

Each tablet set dissolved in 20 ml deionized water yields a ready-to-use buffered solution containing pNPP.

N 1891 SIGMA FAST™ p-Nitrophenyl Phosphate Tablets 5 sets
50 sets

tablet, To prepare 5 mL

Each tablet set dissolved in 5 ml deionized water yields a ready-to-use buffered solution containing pNPP.

3,3',5,5'-Tetramethylbenzidine (TMB) Liquid Substrate System for ELISA

T 0440 liquid 100 mL
TMB is a substrate for horseradish peroxidase. Develops a soluble blue reaction product that may be read at 370 or 655 nm. For endpoint assays the reaction may be stopped with acid, forming a yellow reaction product that may be read at 450 nm. Recommended for ELISA (microwell) procedures, not recommended for membrane applications. Ready-to-use. Stable at least one year at 2-8 °C.

3,3',5,5'-Tetramethylbenzidine (TMB) Liquid Substrate System for Membranes

T 0565 liquid 100 mL
TMB is a substrate for horseradish peroxidase. Develops a permanent, insoluble, dark blue reaction product. Recommended for membrane applications, not recommended for ELISA (microwell) procedures. Ready-to-use.