

EZFluor™ 1-step Fluorescent Protein Gel Stain (4L)

Cat. # SCT145-4L

pack size: 4 L

FOR RESEARCH USE ONLY.
NOT FOR USE IN DIAGNOSTIC PROCEDURES.
NOT FOR HUMAN OR ANIMAL CONSUMPTION.

Store at 2-8°C



Data Sheet

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Background

EZFluor™ 1-step Fluorescent Protein Gel Stain is a ready-to-use luminescent protein gel stain. EZFluor™ staining requires only a single 5-30 minute staining step without fixation. Destaining is optional. Moreover, the EZFluor™ protein stain offers safer handling and ease of disposal, because it is an aqueous-based solution that does not contain hazardous methanol or acetic acid. The EZFluor™ protein stain (after pH neutralization) passed environmental toxicity testing and is classified as non-hazardous to the environment under CCR Title 22 regulations.

EZFluor™ 1-step Fluorescent Protein Gel Stain can detect as little as approximately 1-10 ng of protein per band depending on the staining method used. Staining is fully compatible with mass spectrometry and Edman-based sequencing.

Storage

Store EZFluor™ 1-step Fluorescent Protein Gel Stain at 2-8°C. Protect From Light.

Spectral Properties

Absorbance: 280 nm, 450 nm (broad)

Emission: 610 nm

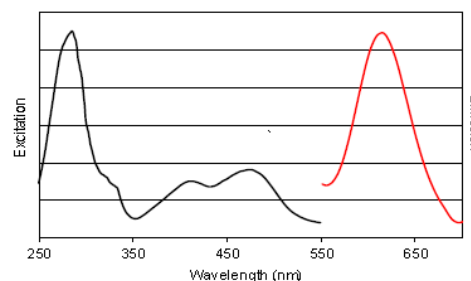


Figure 1. Excitation (left) and emission (right) spectra of EZFluor™ 1-step Fluorescent Protein Gel Stain.

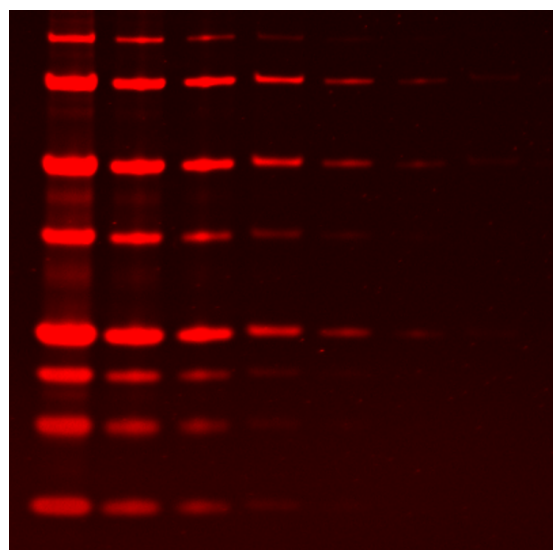


Figure 2. Red fluorescent EZFluor™ 1-step Fluorescent Protein Gel Stain is an alternative to time-consuming and expensive SYPRO® Ruby protein gel stain, and it can be imaged on a UV box or laser gel scanner.

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Assay Protocol

The following protocol is optimized for 1 mm thick, 8 cm X 8 cm SDS PAGE mini-gels.

1. Staining: After electrophoresis, place the unfixed gel in a clean container containing 25 mL of EZFluor™ protein stain per mini-gel and incubate with gentle rocking at room temperature. Bands may start to be detectable after 5 minutes depending on the amount of protein present. For the best sensitivity, stain for 60 minutes.

Note: The gel can be left in the staining solution overnight without over-staining.

Note: For larger gels, scale up the volume of staining solution accordingly using the mini-gel size as a reference.

Note: EZFluor™ protein stain can also be used to stain fixed gels. Fixation with 45% methanol/10% acetic acid for 1 hour before staining, followed by destaining in water can increase sensitivity.

2. Destaining (optional): Destaining is not required, but can reduce background and improve sensitivity. Gels can be destained in water for 2 x 5 minutes up to overnight with gentle rocking.

3. Imaging and Quantitation: Gels stained with EZFluor™ protein stain can be imaged with a variety of instruments:

a) UV Transilluminator: A UV transilluminator with a 300 nm excitation and an ethidium bromide filter may be used for viewing/imaging fluorescence.

b) LED-based Gel Viewer: Blue light LED-based gel boxes designed for safe viewing of DNA/RNA gels can also be used for viewing and imaging Lumitein-stained protein gels. Detection sensitivity may vary depending on device.

c) Laser-based Gel Scanner: Lumitein can be imaged on a gel scanner (such as a Typhoon® scanner) with 488 nm or 532 nm laser excitation with a detection window centered around 610 nm emission (such as the SYPRO® Ruby channel). Using 532 nm excitation may give lower background fluorescence compared to 488 nm excitation.

Note: For downstream analysis such as sequencing or mass spectrometry, gel slices can be processed the same way as SYPRO® Ruby stained gels.

4. Disposal: The EZFluor™ protein stain is a 100% aqueous solution uniquely formulated using chemicals that qualify as food ingredients that can be disposed down the drain. It does not contain methanol and is classified as non-hazardous to the environment. However, the solution is acidic and must be neutralized before drain disposal. To neutralize, add 653uL 1N sodium hydroxide per mL EZFluor™ protein stain and mix well. Alternatively, you can add 26 mg sodium hydroxide pellets per mL EZFluor™ protein stain and stir to dissolve completely.

EZFluor™ is a registered trademark of Merck KGaA

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Please visit www.millipore.com for additional product information, test data and references

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