Fluorescent protein loading buffer

Item No. : P1050

Store: -20℃, valid for 12 months.

Specification: 100μL/1mL/2mL

Note: The 1mL/2mL specification contains 3 tubes: Instant-Bands, Resuspension Buffer, and Enhancing buffer. The 100μL specification contains 2 tubes: Instant-Bands buffer (the Instant-Bands dry powder has been resuspended with the Resuspension Buffer) and Enhancing buffer. The Enhancing Buffer is only required when using Bis-tris glue.

Product Description:

Fluorescent protein loading buffer predye SDS-PAGE protein samples at the sample treatment stage before electrophoresis and fluoresce on the label. After the experiment, the protein strips in the gel or after the transfer of the film can be directly observed and analyzed by ultraviolet lamp, LED lamp or other digital imaging system, without dyeing and decolorization.

Fluorescence protein loading buffer is more sensitive than silver dye. High stability, low background. All proteins can be stained without affecting protein mobility and electrophoretic map. During electrophoresis, the free dye molecules have the same migration rate as bromophenol blue, and move to the end of the gel at the end of the gel running, and the background is clean. Fluorescent protein loading buffer is ideal for SDS-PAGE for protein expression tracking and purification as well as Western blot.

Steps to use:

1. **1mL/2mL specification**: Please add the resuspension buffer according to the volume on the tube wall label before use to get the Instant-Bands buffer. Resuspension buffer may precipitate at 4℃. Resuspension buffer may be resuspended at room temperature until the precipitate disappears.
   100μL specification: Proceed directly to the second step.
2. Mix the Instant-Bands buffer with 1:2 of the protein sample to be electrophoreted. Such as 3ul Instant-Bands buffer + 6ul protein sample.
3. Heat the above treated sample mixture for 5 minutes at 90-100℃. For cell or tissue samples, the heating time is extended to 10 minutes. Make sure the heating temperature is >90℃ to fully heat the sample.

Most prefabricated adhesives (except the Bis-Tris system) can go straight to the next step. The Bis-Tris system, such as Life Technology, is prepared by adding an Enhancing buffer of 20% of the treated sample volume. For example, a 10ul treated sample needs to be enhanced with 2ul Enhancing buffer.

4. The sample is now ready for Loading (no Loading Buffer is required).
5. After electrophoresis, the gel is placed on the transmissometer for observation and photography. The transmissometer can be an ultraviolet lamp, a blue LED lamp, or other gel imaging system. If the light source is in the visible wavelength range, there is no need to peel the glue, because light in the visible wavelength range can penetrate the glass or plastic material.
6. (Optional) Gels treated with fluorescent protein loading buffers can still be stained if necessary. Follow the standard staining procedure.

Points to note:

1. Do not use this loading buffer to treat the molecular weight standard of pre-dyed or pre-treated protein. These products are not compatible with fluorescent protein loading buffers.
2. Sensitivity influencing factors: High pH (greater than 7) will not affect the staining, low pH will reduce the efficiency of staining, if the sample pH below 5, it is recommended to adjust the pH above 7.
3. Fluorescent protein loading buffers are not suitable for use in SDS-PAGE experiments where protein bands are cut for sequencing, mass spectrometry, or antibody preparation.
4. Recommendation -20 storage, if left at room temperature for 2-3 weeks, new DTT can be added and the protein bands will become clear and bright again. Do not add DTT to a final concentration of more than 20mM. Another reducing agent, TCEP(2mM), can also be added for good results.

Related literature:

[1] Zhiheng Ren,Chenli Zhang,Linna Ma,et al. Lysophosphatidic acid induces the migration and invasion of SGC-7901 gastric cancer cells through the LPA2 and Notch signaling pathways. International Journal of Molecular Medicine. May 2019. (IF 2.928)

Note: Please refer to Solebol website for more literature on the use of this product.