DNA Resuspension, Dilution, and Storage Guidelines

NGS TARGET ENRICHMENT SOLUTIONS: CUSTOM PROBES AND PANELS

Twist Bioscience probes for NGS target enrichment may be shipped in solution or lyophilized.

Probes shipped in solution:

Products shipped in solution are at 1x concentration and are ready to use. Small white particles may be observed in the solution, but will not impact performance. Please refer to the relevant protocol for guidance on use with Twist library preparation and enrichment reagents.

Probes shipped lyophilized:

Lyophilized products will need to be resuspended before use. Prepare probes according to the following guidelines to ensure optimal performance.

1. Upon receipt, briefly centrifuge the tube or plate.

2. Resuspend in nuclease-free 10 mM Tris, 1 mM EDTA, pH 8.0 to the desired concentration or calculated volume. Small white particles may be observed in the solution, this will not impact performance.

   A. Convert from mass (µg) to resuspension volume (µL).
   The resuspension volume calculation is based on using 0.2 fmole/probe per reaction and 4 µL total probes for a typical hybridization.

   • For 120mer probes: $\text{volume (µL)} = \dfrac{\text{µg DNA} \times 378{,}000\ \text{µL-probe/µg}}{\text{number of probes}}$

   • For 80mer probes: $\text{volume (µL)} = \dfrac{\text{µg DNA} \times 506{,}000\ \text{µL-probe/µg}}{\text{number of probes}}$

   B. Convert from mass (µg) to moles (pmol) using the equation below:

   $$\text{pmol DNA} = \frac{\text{X µg DNA} \times 10^{6}\ \text{g/µg}}{\text{(Y+40) nt} \times 330\text{/nt)} \times (10^{12}\ \text{pmol/mol})}$$

   The Mass of probe (X) can be obtained from the Product Information Sheet included in the shipment and attached to the shipment confirmation email. The probe length (Y) in the formula (Y+40) accounts for Twist probe manufacturing process.

   • For 120mer probes: pmol DNA = (X µg DNA) (18.9 pmol/ug)

   • For 80mer probes: pmol DNA = (X µg DNA) (25.3 pmol/ug)

3. Store the resuspended probes at –20°C.

SUPPLIER INFORMATION:

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