

GeneScan™ 500 ROX™ Size Standard

Catalog Number 401734

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Contents†	Size	Storage conditions
16 ROX™ dye-labeled, single-stranded DNA fragments	2 X 200 µL (800 reactions‡)	2–8°C for 1 year from date of manufacture. Do not freeze.

† With the retirement of the ABI PRISM® 377 DNA Sequencer this kit no longer contains the gel loading buffer. If you need to continue to purchase the loading buffer, it is available as a separate part (Cat. no. 402055).

‡ 800 reactions when using the recommended loading amount of 0.5 µL.

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from www.lifetechnologies.com/support.

Product description

GeneScan™ 500 ROX™ Size Standard is an internal lane size standard developed for use with fluorescence-based DNA electrophoresis systems from Life Technologies. The use of an internal lane size standard enables automated data analysis and is also essential for achieving high run-to-run precision in sizing DNA fragments by electrophoresis. GeneScan™ 500 ROX™ Size Standard is designed for sizing DNA fragments in the 35–500 bp range and provides 16 single-stranded, ROX™ dye-labeled fragments of 35, 50, 75, 100, 139, 150, 160, 200, 250, 300, 340, 350, 400, 450, 490, and 500 bases. Each of the DNA fragments is labeled with a proprietary fluorophore, which results in a single peak when run under both denaturing and non-denaturing conditions.

Instructions for use

Sample preparation

1. Before use, mix the contents of each tube thoroughly and centrifuge briefly to collect the liquid at the bottom of the tube. Typical loading cocktails are as follows:

Component	Electrophoresis system			
	310	3130/3100 Series	3500 Series	3730 Series
Sample	0.5 µL	0.5 µL	0.5 µL	0.5 µL
GeneScan™ 500 ROX™ Size Standard	0.5 µL	0.25 µL	0.25 µL	0.5 µL
Hi-Di™ Formamide (Cat. no. 4311320)†	9.0 µL	9.25 µL	9.25 µL	9.0 µL

† Not included in this kit.

Note: We highly recommend using the ratios of DNA sample (PCR product) and size standard presented in the table as a starting point only. Optimize the ratios if necessary, based on your experimental results. Also, see guidelines in the following section.

IMPORTANT! For HID applications, please follow protocol volumes provided with those application kits.

2. Heat the loading cocktail for 3 minutes at 95°C.
3. Immediately chill on ice for a few minutes and load samples.

For Research Use Only. Not for use in diagnostic procedures.



Guidelines

Optimize your analysis based on the following information about use of this standard on capillary electrophoresis instruments:

- The 250-bp peak is sensitive to small temperature variations. The 250-bp fragment should not be used when defining the size standard in GeneMapper® Software.
- The 340-bp peak is subject to large temperature variations.
- Fragment analysis primer peaks can often interfere with the detection of the 35-bp peak.

Note: Discard any unused reagent that has been diluted in Hi-Di™ Formamide.

Limited product warranty

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