



SensiFAST™ Lyo-Ready No-ROX Mix

Exceed the Limit

- **Glycerol-free:** ideal for preparation of custom lyophilized qPCR master mixes for improved convenience and extended room-temperature stability
- **Reproducible:** consistent results between technical replicates for increased confidence in results
- **Robust:** reliable, accurate detection of DNA and cDNA targets from a broad range of sample types
- **Sensitive:** reliable quantification of low abundance targets and scarce samples
- **Fast:** delivers reproducible, accurate assay results in as little as 30 minutes
- **Efficient:** excellent performance in multiplex assays
- **Specific:** antibody-mediated hot-start DNA polymerase minimizes non-specific amplification for improved assay sensitivity and reliability

SensiFAST™ Lyo-Ready No-ROX Mix, a lyophilization-compatible qPCR master mix, provides a number of advantages over standard 'wet' mix formulations that make it ideal for high-throughput and point-of-care diagnostic tests.

SensiFAST Lyo-Ready No-ROX Mix is a glycerol-free qPCR mix containing reaction buffer, dNTP, MgCl₂, lyo-exipients together with an antibody-mediated hot-start DNA polymerase. The reconstitution of SensiFAST Lyo-Ready No-ROX Mix, containing target-specific primers and probes, with aqueous template is key to reducing handling time and maximizing sample input, while ambient temperature stability of the lyophilized test permits transportation and storage under a range of conditions.

The SensiFAST Lyo-Ready No-ROX Mix also supports fast, highly reproducible multiplex real-time PCR and has been validated on all commonly-used real-time instruments that do not require the passive reference dye ROX.

MULTIPLEX EFFICIENCY

The SensiFAST™ Lyo-ready No-ROX Mix delivers the same accurate, highly-reproducible assay performance from the reconstituted mix as it does from the wet mix (Fig. 1) and has been validated in quadruplex TaqMan viral detection assays to give the same PCR efficiencies for both singleplex and multiplex for both wet and reconstituted mixes.

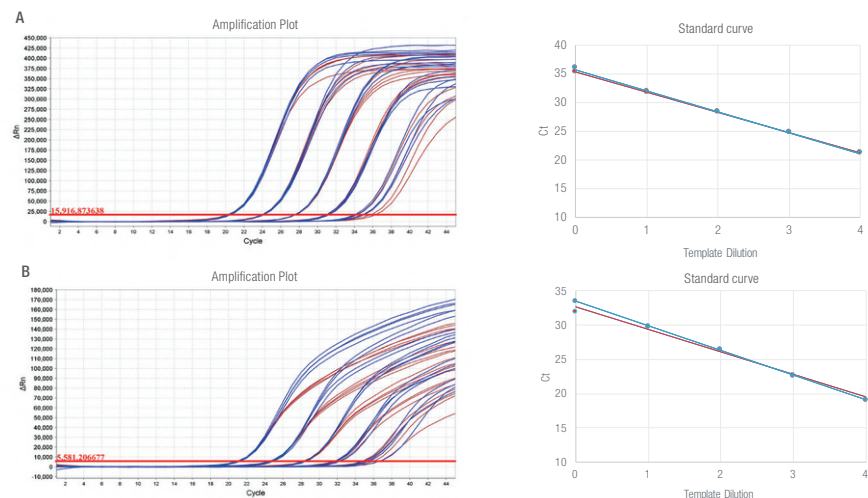


Fig. 1. Comparison of the efficiency and sensitivity of wet and lyophilized mixes
The lyophilized (blue) and wet (red) mix amplification profiles for *Actg* (A) and *Gapdh* (B) amplicons are shown. The efficiencies for *Actg* and *Gapdh* were 95 % and 95 % respectively, for the wet mix and 93 % and 94 % respectively for the lyophilized mix

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STORAGE AND STABILITY

Following lyophilization, the SensiFAST Lyo-Ready No-ROX Mix is stable for a minimum of 24 months at room temperature (17-23 °C) and for up to three months at 37 °C (Fig. 2). Furthermore, the mix is stable when lyophilized in the absence and presence of primers and probes.

RT-qPCR COMPATIBILITY AND SENSITIVITY

Further testing of the SensiFAST Lyo-Ready No-ROX Mix with reverse transcriptase (RT) showed high efficiency in multiplex RT-qPCR assays (Fig. 3) allowing high sensitivity detection of low copy number RNA targets. In one-step RT-qPCR format, SensiFAST Lyo-Ready No-ROX Mix can simultaneously detect low abundance RNA and DNA viruses direct from sample (Fig. 4). A wet mix is at two times concentration, so the maximum amount of sample that can be added is an equal volume, however as the volume of SensiFAST Lyo-Ready No-ROX Mix is reduced by lyophilization, larger volumes of sample can be added, thereby increasing the potential sensitivity even further.

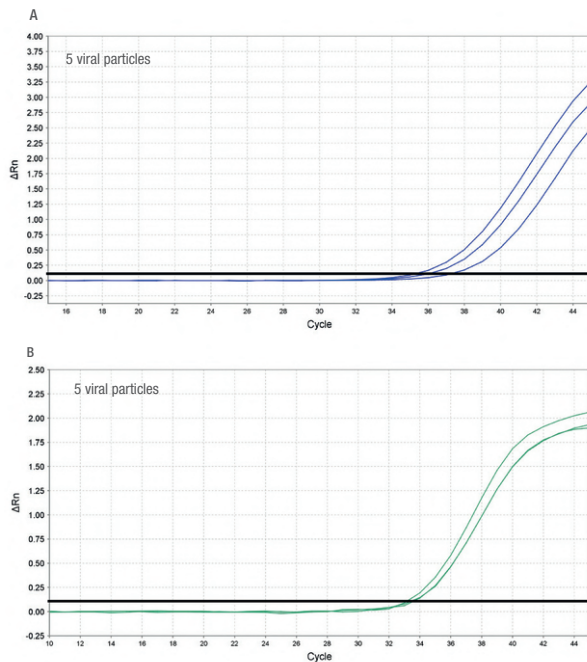


Fig. 4. Simultaneous detection of DNA and RNA viruses

Amplification of viral gene targets in a multiplexed RT-qPCR assay. The amplification profiles show that as few as five viral particles per reaction can be detected for both A. cytomegalovirus (DNA) and B. hepatitis A virus (RNA)

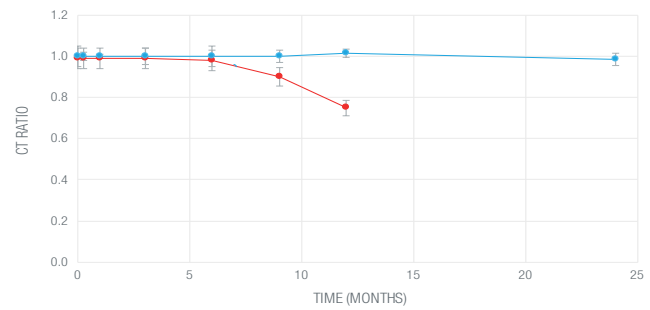


Fig. 2. Storage and stability

Lyophilized SensiFAST Lyo-Ready No-ROX Mix demonstrates stability at room temperature (blue) and 37 °C (red) up to 24 months and 12 months, respectively. Ct values were calculated as a ratio of the lyophilized to wet mix

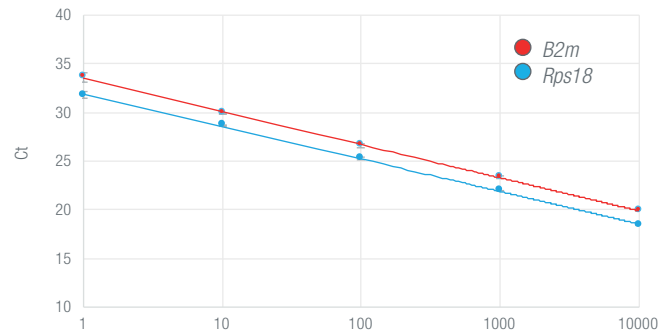


Fig. 3. Suitability of SensiFAST Lyo-Ready No-ROX Mix for RT-qPCR

The mix delivered high PCR efficiencies for *Rps18* (99%) and *B2m* (97%) amplicons in multiplex reactions

Ordering Information

| SensiFAST Lyo-Ready No-ROX Mix | Size | Cat. # |
|--------------------------------|------------|------------|
| SensiFAST Lyo-Ready No-ROX Mix | 1 x 5 mL | BIO-11061* |
| SensiFAST Lyo-Ready No-ROX Mix | 10 x 10 mL | BIO-11060 |

* BIO-11061 is an evaluation pack, limited to one purchase per customer.

PSGBL118V1.2

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