Product Datasheet

SCRIPT RT-qPCR GreenMaster UNG (orb1733653)

Description	SCRIPT RT-qPCR SybrMaster UNG is designed for quantitative real-time analyses of RNA templates using the fluorescent DNA stain SYBR Green. The ready-to-use mix is based on a genetically engineered reverse transcriptase with enhanced thermal stability providing increased specificity, high cDNA yield and improved efficiency for highly structured and long cDNA fragments. The 2x conc. mix contains all reagents required for RT-qPCR (except template and primers) allow fast and easy preparation with a minimum of pipetting steps. The premium quality enzymes and the optimized reaction buffer ensure superior real time PCR results. The mix contains UNG (Uracil-N-Glycosylase) and dUTP instead of dTTP to eliminate carry-over contamination of DNA from previous PCR reactions. The UNG treatment at the onset of thermal cycling removes uracil residues from dU-containing DNA and prevents it from serving as template. RT-qPCR is used to amplify double-stranded DNA from single-stranded RNA templates to allow a rapid real-time quantification of RNA targets. In the reverse transcription step the reverse transcriptase synthesizes single-stranded DNA molecules (cDNA) complementary to the RNA template. In the first cycle of the PCR step the hot-start DNA polymerase synthesizes DNA molecules complementary to the cDNA, thus generating a double-stranded DNA template. The hot-start polymerase activity is blocked at ambient temperature and switched on automatically at the onset of the initial denaturation. The thermal activation prevents the extension of non-specifically annealed primers and primer-dimer formations at low temperatures during PCR setup. One-step RT-qPCR offers tremendous convenience when applied to analysis of targets from multiple samples of RNA and minimizes the risk of contaminations. The mix can also be used in combination with ROX reference dye (#orb533366) in PCR instruments that are compatible with the evaluation of the ROX signal.
Form/Appearance	liquid
Concentration	2x conc
Storage	store at -20 °C. avoid freeze/thaw cycles, store dark. stable at 4 °C for up to 4 weeks
Note	For research use only

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Application notes	b>Spectroscopic Propertie: λexc 494 nm (bound to DNA), λem 521 nm, (bound to DNA).
Expiration Date	12 months from date of receipt.

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