

Product Information	
AccuStart™ II PCR ToughMix®	
Part Number	95142-04K
Number of Reactions	4000 Reactions
Reaction Size	25µL
Storage Temperature	-25°C to -15°C
Lot Number	66240048
Reference Number	033123, 071223
Expiration Date	03/31/2026

**Product Description:**

AccuStart II PCR ToughMix is a 2X concentrated ready-to-use reaction cocktail for PCR amplification of DNA templates that overcomes many known inhibitors of PCR often present in crude samples extracted from environmental specimens, plant tissues, or animal tissues. The only user supplied components are DNA template, primers, and molecular grade water.

A key component to AccuStart PCR ToughMix is an ultrapure, highly processive thermostable DNA polymerase that is combined with high avidity monoclonal antibodies. These antibodies bind the polymerase and keep it inactive prior to the initial PCR denaturation step. This enables specific and efficient primer extension with the convenience of room temperature reaction assembly. Similar to Taq DNA polymerase, the activated polymerase in AccuStart II PCR ToughMix possesses 5'>3' DNA polymerase activity and a double-strand specific 5'>3' exonuclease. The polymerase does not have 3'-exonuclease

activity and is free of any contaminating endo or exonuclease activities. PCR products generally contain non-templated dA additions and can be cloned using vectors that have a single 3'-overhanging thymine residue on each end.

GelTrack Loading Dye is a mixture of blue and yellow electrophoresis-tracking dyes that migrate at approximately 4kb and 50 bp. This optional component simplifies post-PCR analysis with gel electrophoresis and eliminates potential for cross contamination by enabling *direct* transfer of PCR products to the gel sample wells.

**Component Part Numbers:**

**84254 AccuStart II PCR ToughMix 50 mL**

**84256 50X Loading Dye, 2.0 mL**

Product Specifications			
95142			
Assay	4.1KB PCR Functional Assay	DNase	RNase
Result	Pass	Pass	Pass

**Quality Control Analysis and Specifications:**
**Nuclease Assay:**

**DNase:** DNase activity must be below the detectable limits of 100 pg DNase I equivalent as assayed using a fluorogenic substrate following a 1 hour incubation at 37°C with each kit component at 1X concentration.

**RNase:** RNase activity must be below the detectable limits of 1 pg RNase A equivalent as assayed using a fluorogenic substrate following a 1 hour incubation at 37°C with each kit component at 1X concentration.

**4.1KB PCR Functional Assay:** Negative control must be free of visible product with a single band at ~4.1Kb visible from 35 cycles of PCR using 20ng human genomic DNA.

**Limitations of Use**

QuantaBio, UltraPlex, qScript, GelTrack, ToughMix, PerfeCta, and FastMix are registered trademarks of QuantaBio, LLC. Applied Biosystems, StepOne, StepOnePlus and ROX are trademarks of Thermo Fisher Scientific and or its subsidiaries. Please contact QuantaBio for more information.

This product was developed, manufactured, and sold for *in vitro* use only. The product is not suitable for administration to humans or animals. SDS sheets relevant to this product are available upon request.

100 Cummings Center, Suite 407J, Beverly, MA 01915 • Phone +1 888-959-5165 • [www.quantabio.com](http://www.quantabio.com) FMWI-016.2 Rev.03