AccuStart™ II GelTrack™ PCR SuperMix (2X)

Cat No.	95136-100	Size:	100 x 25 µL reactions (1 x 1.25 mL)	**Store at -25ºC to - 15°C**
	95136-500		500 x 25 µL reactions (5 x 1.25 mL)	
	95136-04K		4000 x 25 µL reactions (1 x 50 mL)	

Description

AccuStart II GelTrack PCR SuperMix is a 2X concentrated, ready-to-use reaction cocktail for routine PCR amplification of DNA fragments up to 4 kb followed by analysis on agarose gels. It contains all components, except primers and template. AccuStart II GelTrack PCR SuperMix simplifies reaction assembly, improves assay reproducibility, and reduces the risk of contamination. The supermix includes electrophoresis-tracking dyes that migrate at approximately 4 kb and 50 bp to allow direct loading of PCR product on agarose gels following amplification. AccuStart Taq DNA polymerase in the master mix is inactivated with monoclonal antibodies that bind the polymerase and keep it inactive prior to the initial PCR denaturation step. Upon heat activation (1 minute at 94ºC), the antibodies denature irreversibly, releasing fully active, unmodified Taq DNA polymerase. This enables specific and efficient primer extension with the convenience of room temperature reaction assembly.

Components

AccuStart II GelTrack PCR SuperMix (2X)	2X mix containing optimized concentrations of $MgCl_2$, dNTPs, reaction buffer, AccuStart Taq DNA Polymerase, AccuStart Taq antibodies, stabilizers and gel loading dyes.

Storage and Stability

Store components in a constant temperature freezer at -25°C to -15°C upon receipt.
Repeated freezing and thawing does not impair product performance.
For lot specific expiry date, refer to package label, Certificate of Analysis or Product Specification Form.

Reaction Assembly

Component	Volume for 25-µL rxn.	Final Concentration
AccuStart II GelTrack PCR SuperMix (2X)	12.5 µL	1x
Forward primer	variable	100 – 500 nM
Reverse primer	variable	100 – 500 nM
Nuclease-free water	variable	
DNA Template	5 – 10 µL	Variable
Final Volume (µL)	25 µL	

Note: For smaller or larger reaction volumes (10 to 50 µL), scale all components proportionally.

Reaction Protocol

Incubate the completed reaction mix in thermal cycler as follows:

Initial denaturation:	94ºC, 1 to 3 min
PCR cycling (20 – 40 cycles:)	94ºC, 10 to 30 s 55 – 65ºC, 15 to 30s 68 – 72ºC, 1 min per kb of product length
Hold	4ºC until processed for analysis

Full activation of Taq DNA polymerase occurs within 30 seconds at 94ºC. Complete denaturation of dsDNA target is important for efficient PCR amplification and may require different initial denaturation times depending on the properties of a given target sequence.

Quality Control

Kit components are free of contaminating DNase and RNase. AccuStart II GelTrack PCR SuperMix is functionally tested for amplification of a 4-kb fragment from a single-copy gene in human genomic DNA.

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