

AccuStart Long Range SuperMix

Superior sensitivity and multiplexing for DNA amplification of long targets

FEATURES AND BENEFITS:

- Amplify +24 kb gDNA and +40 kb lambda DNA
- 4x concentration enables superior sensitivity with low inputs (100 pg)
- Multiplex up to 6 targets with each target up to 6 kb in length
- Stabilized, single-tube SuperMix minimizes pipetting errors and hands-on-time
- Reliable lot-to-lot reproducibility ensures consistent results

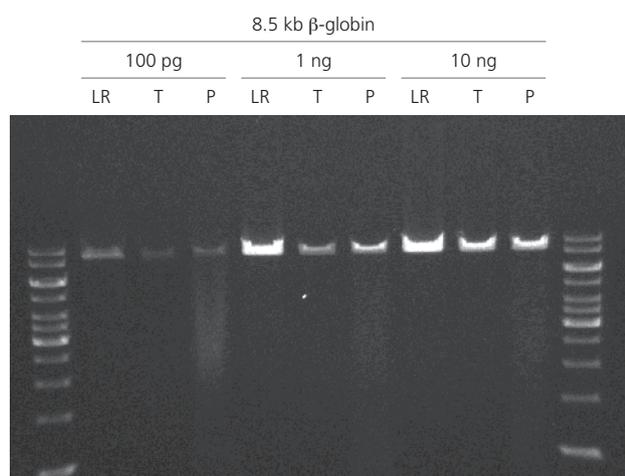
DESCRIPTION:

The AccuStart Long Range SuperMix is a 4x, ready-to-use solution that contains all the components for long range target amplifications, including a blend of two hot-start thermostable DNA polymerases (one with strong proof-reading activity) and an optimized buffer to ensure high efficiency, sensitivity and specificity.

This SuperMix enables routine and easy amplification of up to 24 kb targets from gDNA with high accuracy (>10-fold better fidelity than Taq) and accommodates targets with broad GC-content (no separate GC buffer needed). This product is also capable of amplifying multiple targets simultaneously and is suitable for End Point PCR, template prep for Sanger Sequencing, NGS, Cloning and HLA typing.

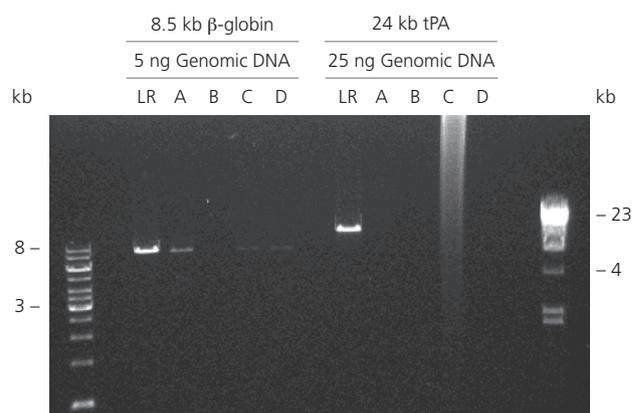
Superior Sensitivity: Improved yields across a range of DNA inputs and target sizes

The AccuStart Long Range SuperMix can amplify DNA inputs as low as 100 pg, across a wide range of target sizes.



LR AccuStart Long Range SuperMix T Takara LR ver2.1
P Promega GoTaq LR

Figure 1 Comparison of sensitivity and yield. 8.5 kb β -globin fragments were amplified in 50 μ l reaction volumes according to the recommended protocol. Reaction inputs varied from 100 pg – 10 ng. Following a 3 min activation at 95°C; 30 cycles of PCR were performed: 92°C, 30 s; 65°C, 6 min; 72°C, 10 min. 5 μ l of PCR products were analyzed on a 0.5% agarose gel with a DNA marker.



LR AccuStart Long Range SuperMix A NEB LA Master Mix
B KAPA ReadyMix C AccuPrime Taq High Fidelity
D Platinum Taq High Fidelity

Figure 2 Comparison of yield over fragment length. 8.5 kb β -globin and 24 kb tPA fragments were amplified in 50 μ l reaction volumes according to the recommended protocol. Reaction inputs were 5 ng and 25 ng for the 8 kb and 24 kb fragments, respectively. Following a 3 min activation at 95°C; 27 cycles of PCR were performed: 92°C, 30 s; 65°C, 6 min (8.5 kb), 12 min (24 kb); 72°C, 10 min. 5 μ l of PCR products were analyzed on a 0.5% agarose gel with a DNA marker.

Maximized Multiplexing: Amplify 6 targets up to 6 kb each

The AccuStart Long Range SuperMix can multiplex 6 targets up to 6 kb each, further speeding up experiments, reducing costs and allowing for more data to be derived per run.

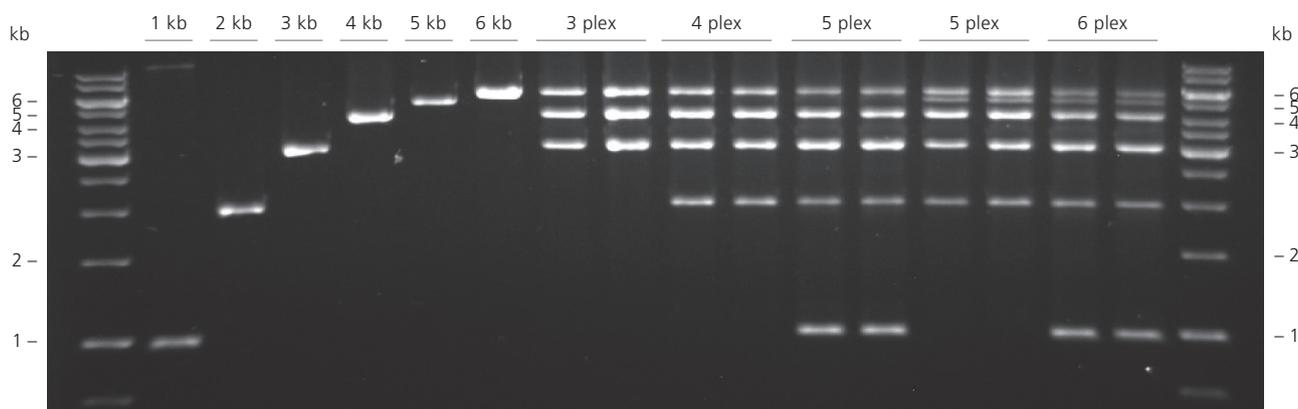
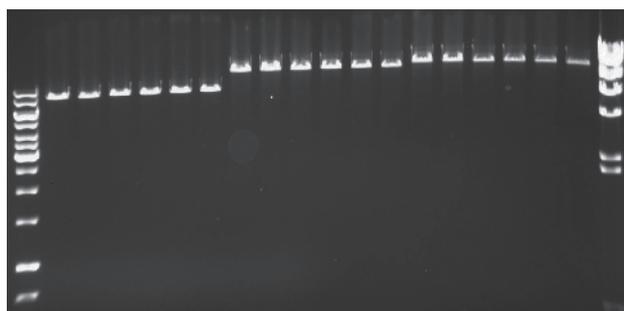


Figure 3 Strong multiplexing capabilities. Multiplex PCR reactions were performed for amplification of 2 kb, 3 kb, 4 kb and 5 kb BRCA 1 targets with 1 kb and 6 kb BRCA 2 targets from 10 ng human genomic DNA template. Reactions were run on MJ Research PTC-200 Thermal Cycler. Following a 2 min activation of 95°C; 27 cycles of PCR were performed: 92°C, 30 s, 65°C, 8 min; 72°C, 10 min. 4 µl of PCR products were analyzed on a 0.7% agarose gel.

Reliable lot-to-lot reproducibility

AccuStart Long Range SuperMix is manufactured in a state of the art facility under an ISO13485 quality system which provides consistent lot-to-lot reproducibility.

8.5 kb β-globin			17.5 kb β-globin			24 kb tPA		
1	2	3	1	2	3	1	2	3



- 1 Lot 1
- 2 Lot 2
- 3 Lot 3

Figure 4 Lot-to-Lot consistency. 8.5 kb β-globin, 17.5 kb and 24 kb tPA fragments were amplified in 50 µl reaction volumes according to the recommended protocol. Reaction inputs were 5 ng, 10 ng and 25 ng for the 8 kb, 17.5 kb and 24 kb fragments, respectively. Following a 3 min activation at 95°C; 27 cycles of PCR were performed: 92°C, 30 s; 65°C, 6 min (8.5 kb), 8 min (17.5 kb), 12 min (24 kb); 72°C, 10 min. 5 µl of PCR products were analyzed on a 0.5% agarose gel with a DNA marker.

ORDER INFO

Product Name

AccuStart Long Range SuperMix - 25 R
 AccuStart Long Range SuperMix - 100 R

Quantabio Catalog Number

95199-025
 95199-100

Size

25 rxns
 100 rxns

Quantabio products are intended for molecular biology applications. The products are not intended for the diagnosis, prevention or treatment of a disease.
 MK-SF-0033 REV 03 AccuStart LongRange SuperMix 0121