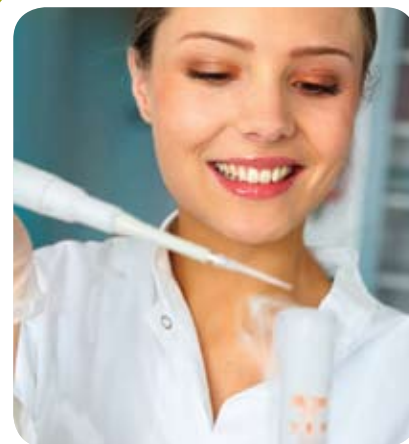


# PCR SuperMix and Polymerase

## ACCUSTART™ PCR SUPERMIX AND POLYMERASES FOR HIGHLY SPECIFIC PCR AMPLIFICATION

AccuStart™ Taq DNA Polymerase and SuperMix provide high specificity amplification for all routine PCR applications. AccuStart™ Taq DNA Polymerase HiFi is optimized for longer amplicons. The AccuStart™ antibody mediated hot-start enables specific and efficient primer extension in the PCR process with the added convenience of room temperature reaction assembly.



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### FEATURES AND BENEFITS

- High yield, high sensitivity – reliably amplify single-copy genes
- HiFi kits yield 6 times the fidelity of standard Taq Polymerase
- Antibody-mediated hot-start reduces non-specific amplification

### AccuStart™ PCR SuperMix and Taq DNA Polymerase

AccuStart™ is a recombinant Taq DNA polymerase preparation which contains monoclonal antibodies that bind to the polymerase and keep it inactive before PCR thermal cycling. Upon heat activation the antibodies denature irreversibly, releasing fully active Taq DNA polymerase. AccuStart™ PCR SuperMix is a 2X concentrated, ready-to-use reaction cocktail for routine PCR amplification of DNA fragments up to 4 kb. This SuperMix greatly enhances experimental reliability and precision since it contains all component, except primers and template

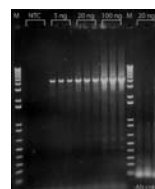
(See Figure 1). AccuStart SuperMix is stable for 1 year and withstands repeated freeze-thaw cycles.

### AccuStart Taq DNA Polymerase HiFi

AccuStart HiFi is an enzyme mixture of recombinant Taq DNA polymerase preparation, a thermal stable DNA polymerase with 3' to 5' exonuclease activity, and monoclonal antibodies that bind to the polymerase and keep in inactive before PCR thermal cycling. The enzyme mixture and optimized HiFi PCR buffer improves the fidelity of DNA synthesis approximately 6-fold higher than Taq DNA polymerase alone and enables amplification of DNA fragments up to 20-kb long. This makes AccuStart HiFi ideal for challenging or difficult templates and for next-generation sequencing applications such as the Genome Sequencer from Roche.

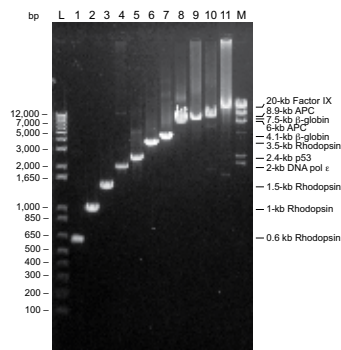
### ORDERING INFORMATION

PRODUCT	Quanta Cat. No.	Pack Size
<b>AccuStart™ PCR SuperMix</b>	95060-100	100 Reactions
	95060-500	500 Reactions
	95060-02K	2000 Reactions
<b>AccuStart™ Taq DNA Polymerase</b>	95061-250	250 Units
	95061-01K	1000 Units
	95061-05K	5000 Units
<b>AccuStart™ Taq DNA Pol. HiFi</b>	95085-250	250 Units
	95085-01K	1000 Units
	95085-02K	2000 Units
<b>10mM dNTP Mix</b>	95062-200	200 µl
	95062-01K	1000 µl



**Fig. 1 Precise Amplification**

AccuStart™ PCR SuperMix was used to amplify a 4-kb fragment from the  $\beta$ -globin gene from varying amounts of human genomic DNA as indicated. Control reaction with no antibody (no hot-start) fails to amplify.



**Fig. 2 High yield and specific PCR amplification of fragments up to 20-kb**

Fragment length and identity are indicated in the figure. Reactions contained either 1 ng (lanes 1-7, 9), or 100 ng (lane 11) of human gDNA; or 50 ng of oligo-dT primed cDNA from HeLa cell total RNA (lanes 6 and 8). PCR was analyzed by 0.8% agarose gel electrophoresis in 0.5X TBE with 0.25 µg/ml ethidium bromide.

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