Product Information	
AccuStart™ II Taq DNA Polymerase	
Part Number	95141-250
Number of Units	250 Units
Unit Size	5 units/µL
Storage Temperature	-25°C to -15°C
Lot Number	024485
Reference Number	22180, 013017, 110717
Expiration Date	06/30/2020

Component Part Numbers:
84247 AccuStart II Taq, 0.05mL
84248 PCR Buffer II (10X) 1.25mL
84030 50mM $MgCl_2$ 1.25mL

Product Description:
AccuStart II Taq DNA Polymerase is a high purity, recombinant Taq DNA polymerase preparation with high avidity 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. Non-specific extension of primers at low temperatures is a common cause of artifacts and poor sensitivity in PCR. The AccuStart II automatic hot-start enables specific and efficient primer extension in the PCR process with the added convenience of room temperature reaction assembly. The included 10X PCR Buffer II is optimized for higher yields, improved specificity, and enhanced multiplexing capability. Activated AccuStart II Taq DNA polymerase 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. One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 74°C. AccuStart II Taq DNA polymerase contains extremely low levels of residual host, E. coli genomic DNA.

Product Specifications				
95141				
Assay	**4.1KB PCR Functional Assay**	**(IL1-b) from Human Genomic DNA qPCR Functional Assay**	**DNase**	**RNase**
Result	Pass	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.

(IL1-b) from Human Genomic DNA qPCR Functional Assay: There must be detection of IL1-β from 33ng to 33pg (1 x 10^4 copies to 10 copies). Coefficient of determination $R^2 \geq 0.990$ from Ct standard curve analysis; Slope from Ct standard curve analysis between -3.20 and -3.65

Limitations of Use

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.