Product Information	
PerfeCTa™ qPCR ToughMix™ UNG	
Part Number	95138-05K
Number of Reactions	5000 Reactions
Reaction Size	20µL
Storage Temperature	-25ºC to -15ºC
Lot Number	021696
Reference Number	033017
Expiration Date	03/31/2020

Product Description:

PerfeCTa qPCR ToughMix UNG is a 2X concentrated ready-to-use reaction cocktail for PCR amplification of DNA templates that relieves several types of PCR inhibition commonly encountered with crude extracts, environmental specimens, plant tissues, animal tissues, and complex food matrices. This robust real-time qPCR reagent provides maximum sensitivity and PCR efficiency with a variety of fluorogenic probe chemistries, including TaqMan® hydrolysis probes. The only user-supplied components are primers, probe(s), and DNA template. Pre-blended with inert AccuVue plate loading dye to help minimize pipette errors during setup and provides visual confirmation of thorough mixing. A key component of PerfeCTa qPCR ToughMix is an ultra pure, highly processive thermostable DNA polymerase that is combined with high avidity monoclonal antibodies. This proprietary polymerase mix is highly resistant to PCR inhibitors and provides an extremely stringent automatic hot-start allowing reaction assembly, and temporary storage, at room temperature prior to PCR amplification. PerfeCTa qPCR ToughMix delivers exceptional performance with either fast or conventional PCR cycling protocols. UNG containing versions are blended with Uracil N-glycosylase to eliminate potential post-PCR carryover contamination associated with routine molecular testing.

Component Part Numbers:

84242 PerfeCTa qPCR ToughMix, UNG 50.0mL

Product Specifications				
95138				
Assay	**qPCR Plasmid DNA Functional Assay**	**qPCR Genomic DNA 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.

qPCR Plasmid DNA Functional Assay: Fast-cycling Real-time PCR detection of log-fold serial dilutions of a control DNA from 10 to 1x 10^7 copies. Linear regression analysis of cycle threshold versus log input quantity must give a slope of between –3.20 and –3.65 and coefficient of determination (R^2) ≥0.990.

qPCR Genomic DNA Functional Assay: Real-time PCR detection of single-copy gene in human genomic DNA using activation step of 10 minutes at 95°C. Linear regression analysis of cycle threshold versus log input quantity for a log-fold serial dilutions of human genomic DNA from 10 copies to 1 x 10^5 copies must give a slope of between –3.2 and –3.65 and coefficient of determination (R^2) ≥0.990 with accurate discrimination of two fold discrimination of 500, 1000, 2000 copies.

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.