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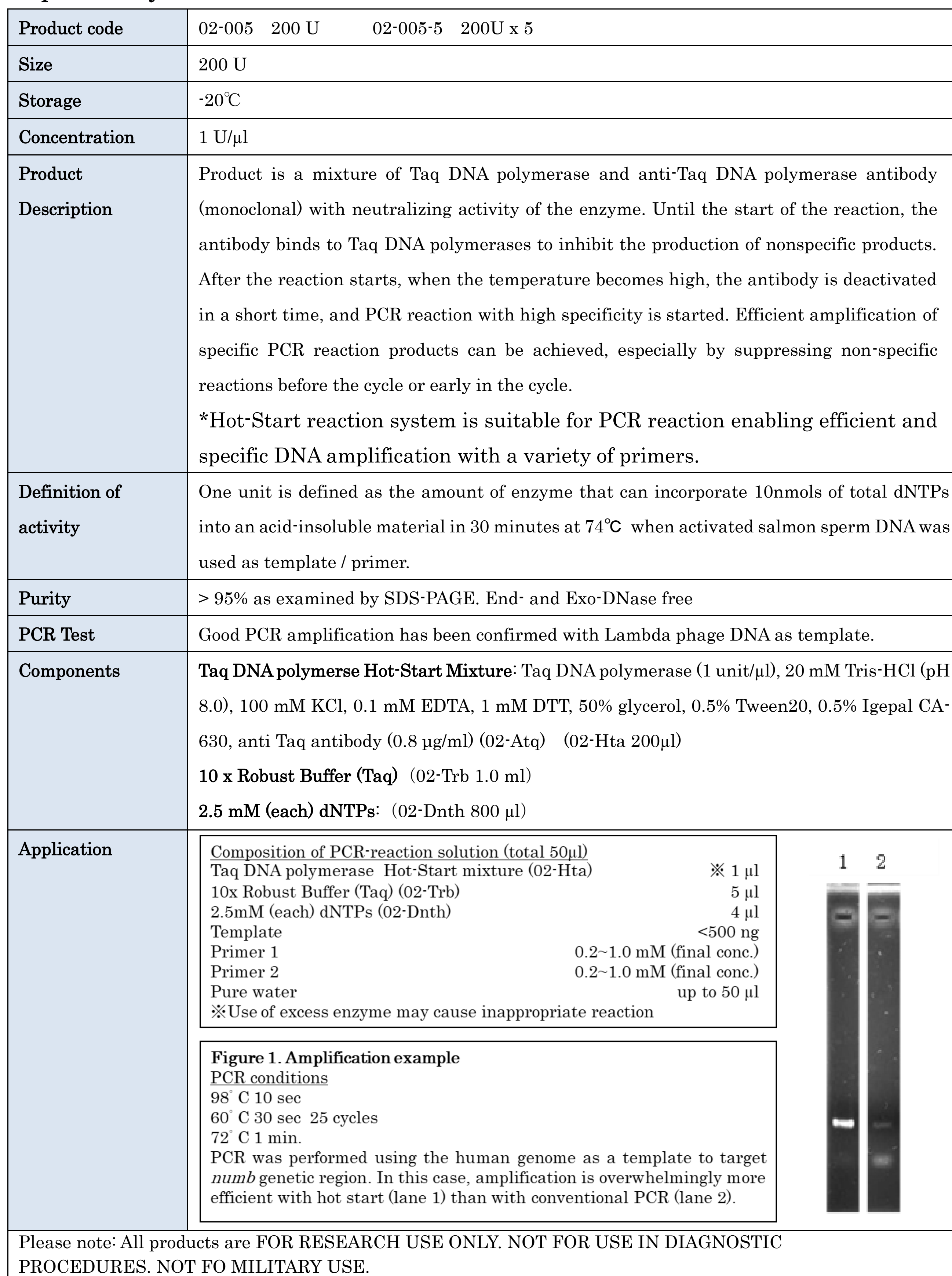
Taq DNA Polymerase Hot-Start with Robust Buffer (+ dNTPs)



Product code	02-005 200 U 02-005-5 200U x 5
Size	200 U
Storage	-20℃
Concentration	1 U/μl
Product Description	Product is a mixture of Taq DNA polymerase and anti-Taq DNA polymerase antibody (monoclonal) with neutralizing activity of the enzyme. Until the start of the reaction, the antibody binds to Taq DNA polymerases to inhibit the production of nonspecific products. After the reaction starts, when the temperature becomes high, the antibody is deactivated in a short time, and PCR reaction with high specificity is started. Efficient amplification of specific PCR reaction products can be achieved, especially by suppressing non-specific reactions before the cycle or early in the cycle. *Hot-Start reaction system is suitable for PCR reaction enabling efficient and specific DNA amplification with a variety of primers.
Definition of activity	One unit is defined as the amount of enzyme that can incorporate 10nmols of total dNTPs into an acid-insoluble material in 30 minutes at 74℃ when activated salmon sperm DNA was used as template / primer.
Purity	> 95% as examined by SDS-PAGE. End- and Exo-DNase free
PCR Test	Good PCR amplification has been confirmed with Lambda phage DNA as template.
Components	**Taq DNA polymerse Hot-Start Mixture**: Taq DNA polymerase (1 unit/μl), 20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol, 0.5% Tween20, 0.5% Igepal CA-630, anti Taq antibody (0.8 μg/ml) (02-Atq) (02-Hta 200μl) **10 x Robust Buffer (Taq)** (02-Trb 1.0 ml) **2.5 mM (each) dNTPs**: (02-Dnth 800 μl)
Application	Composition of PCR-reaction solution (total 50μl) Taq DNA polymerase Hot-Start mixture (02-Hta) ※ 1 μl 10x Robust Buffer (Taq) (02-Trb) 5 μl 2.5mM (each) dNTPs (02-Dnth) 4 μl Template <500 ng Primer 1 0.2~1.0 mM (final conc.) Primer 2 0.2~1.0 mM (final conc.) Pure water up to 50 μl ※Use of excess enzyme may cause inappropriate reaction **Figure 1. Amplification example** PCR conditions 98° C 10 sec 60° C 30 sec 25 cycles 72° C 1 min. PCR was performed using the human genome as a template to target *numb* genetic region. In this case, amplification is overwhelmingly more efficient with hot start (lane 1) than with conventional PCR (lane 2). 1 2

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FO MILITARY USE.

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