

**Catalog No.:** D102-200**Product Name:** *Tsg Plus DNA Polymerase***Size:** 200 units**Concentration:** 5 units/ $\mu$ l**Storage:** Store at -20°C.

**Description:** *Tsg Plus DNA Polymerase* is a modified version of *Tsg DNA Polymerase* and achieves higher fidelity. *Tsg DNA Polymerase* itself is a thermostable DNA polymerase isolated from a strain of *Thermus sp.*, and is designed for thermal DNA amplification protocols. *Tsg* is not only more stable than several other DNA polymerases, but also has higher fidelity. Adding another high fidelity thermostable DNA polymerase reduces the error frequency and improves performance in the amplification of large fragment products as well. Amplified products are mixtures of blunt-ended fragments and fragments with overhanging A ends, thereby allowing users the flexibility to choose either blunt-end or TA cloning when cloning is desired.

Amplification conditions for *Taq DNA Polymerase* can be used for *Tsg Plus DNA Polymerase*.

**Quality Control:** *Tsg Plus DNA Polymerase* is highly purified and free of contaminating endonucleases, exonucleases and nicking activity. For endonuclease assay, 1 $\mu$ g of Lamda/Hind III DNA is incubated with 20 units of enzyme in assay buffer at 75°C for 16 hours with no visible contaminating activity observed. Also, every lot is tested for its performance consistency.

**Unit Definition:** One unit incorporates 10nmoles of dNTPs into acid-insoluble material in 30 minutes at 74°C.

**Storage Buffer:** 5 units/ $\mu$ l in 20mM Tris HCl (pH8.0), 0.1mM EDTA, 1mM DTT, 0.1% TritonX-100, and 50% glycerol.

**10x Reaction Buffer (Mg<sup>++</sup>free):** 500mM KCl, 100mM Tris HCl (pH9.0), 1% Triton X-100 is optimized for use with 200 $\mu$ M dNTPs.

**Magnesium Chloride:** 25mM MgCl<sub>2</sub>. In general, 1.5mM MgCl<sub>2</sub> is recommended, however this may vary with different conditions and primer sets.

Related Products	Catalog No.
• dNTP PreMix	D116
• Taq Plus Master Mix	D124
• Tissue-Direct™PCR Kit	D300
• 100bp DNA Ladder	M107
• 1Kb DNA Ladder II	M108
• DNA SafeStain	C138
• Standard-Agarose	A113

*This product is for research use only.*