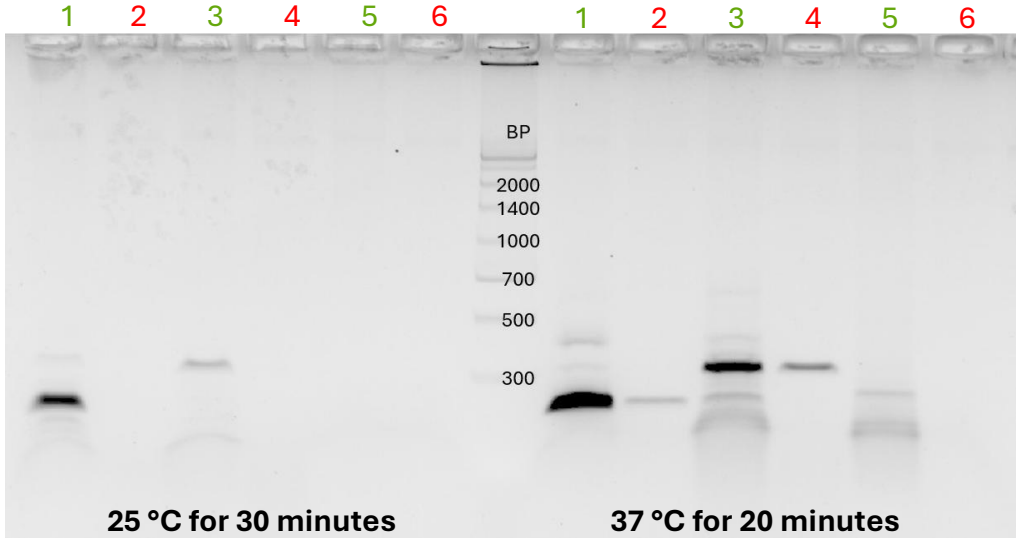
Comparison of Intact Genomics (IG) Lyophilized RPA Master Mix (MM) vs ThermoFisher (TF) Lyo-ready RPA kit

In recent years, Thermo Fisher Scientific (TF) launched its Lyo-ready RPA kit and published misleading data on its website comparing an Intact Genomics (IG) RPA kit with TF's Lyo-ready RPA kit. We have no record of a TF scientist purchasing our RPA kit, and TF did not specify which IG RPA product was used in its comparison. In response, we purchased TF's Lyo-ready RPA kit (Cat. #A72127) and conducted a side-by-side comparison with the IG Lyophilized RPA Master Mix (Cat. #3545Lyo).

RPA Activity Results:



Lane 1. IG RPA MM: 88 pg pUC19 DNA, 214 bp target.
Lane 2. TF RPA Kit: 88 pg pUC19 DNA, 214 bp target.
Lane 3. IG RPA MM: 1 ng soybean gDNA, 321 bp universal target.
Lane 4. TF RPA Kit: 1 ng soybean gDNA, 321 bp universal target.
Lane 5. IG RPA MM: 1 ng soybean gDNA, 242 bp low-copy SMC1 target.
Lane 6. TF RPA Kit: 1 ng soybean gDNA, 242 bp low-copy SMC1 target.

Intact Genomics was the first company to bring individual RPA enzymes and reagents to market in 2016, and we have continued to lead innovation in RPA technology ever since.

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Custom formats, package sizes and bulk pricing are available upon request. Contact us at sales@intactgenomics.com

Findings Under the Tested Conditions:

- The TF Lyo-ready RPA Kit showed no detectable amplification at 25 °C after 30 minutes, even with the pUC19 plasmid template.
- At 37 °C after 20 minutes, the TF kit showed no detectable amplification of the soybean low-copy SMC1 target (lane 6) and only *faint bands with* other targets.
- The IG Lyophilized RPA Master Mix amplified all targets at 37 °C within 20 minutes. At 25 °C after 30 minutes, the low-copy SMC1 target was not detected with 1 ng of soybean genomic DNA.
- *IG's Lyophilized RPA Master Mix requires 3 pipetted additions plus 1 lyophilized vial, versus 10 liquid additions for TF. In a 20 µL reaction, the smallest transfer is 1 µL for IG versus 0.4 µL for TF.*

RPA Reaction Set up:

	1	2	3	4	5	6
	IG	TF	IG	TF	IG	TF
	with pUC19 DNA and primer mix		with Soy DNA and Plant Universal Primer Mix		with Soy DNA and Plant Low Copy Primer Mix	
Template DNA	1 µL	1 µL	1 µL	1 µL	1 µL	1 µL
IG Lyophilized RPA Master Mix	1 vial		1 vial		1 vial	
IG Suspension Solution	17 µL		17 µL		17 µL	
TF Lyo-Ready T4 UvsX Protein		0.5 µL		0.5 µL		0.5 µL
TF T4 UvsY Protein		0.5 µL		0.5 µL		0.5 µL
TF Lyo-Ready T4 gp32 Protein		0.5 µL		0.5 µL		0.5 µL
TF Lyo-Ready Bst DNA Polymerase		0.5 µL		0.5 µL		0.5 µL
TF 2x RPA Reaction Buffer		10 µL		10 µL		10 µL
TF dNTP 10 mM		0.4 µL		0.4 µL		0.4 µL
Primer Mix	1 µL	1 µL	1 µL	1 µL	1 µL	1 µL
280 mM MgOAc	1 µL	1 µL	1 µL	1 µL	1 µL	1 µL
Milli-Q H_2O		4.6 µL		4.6 µL		4.6 µL
Total Volume	**20 µL**	**20 µL**	**20 µL**	**20 µL**	**20 µL**	**20 µL**