

# Cloning results in 6 Steps

## PCR & qPCR

Amplification and detection of specific DNA targets creates workable copies of DNA for downstream use.

Thermo Scientific™ Phusion™ High Fidelity DNA Polymerase	F-530S	100 U
	F-530L	500 U
Thermo Scientific™ Phusion™ High Fidelity Master Mixes	F-532S	100 × 50 µL rxns
	F-532L	500 × 50 µL rxns

## Gel Extraction

DNA extraction from gels is critical to purify DNA fragments for further downstream use.

Thermo Scientific™ GeneJET™ Gel Extraction Kit	K0691	50 preps
	K0692	250 preps
Thermo Scientific™ GeneJET™ Gel Extraction DNA Cleanup Micro Kit	K0831	50 preps
	K0832	250 preps

## Plasmid Purification

Isolate and purify recombinant plasmids from your bacterial colonies to screen for positive clones.

Thermo Scientific™ GeneJET™ Plasmid Miniprep Kit	K0502	50 preps
	K0503	250 preps
Thermo Scientific™ GeneJET™ Plasmid Midiprep Kit	K0481	25 preps
	K0482	100 preps

## Step 1

## Sample Preparation

Nucleic acid purification from different sources is the first step in most molecular biology workflows.

Thermo Scientific™ GeneJET™ RNA Purification Kit	K0731	50 preps
Thermo Scientific™ GeneJET™ Genomic DNA Purification Kit	K0721	50 preps
Thermo Scientific™ GeneJET™ Plant RNA Purification Kit	K0801	50 preps

## Step 3

## Gel Electrophoresis

Detecting DNA molecules according to their molecular weight confirms the phenotypes observed are from the correct DNA molecules.

Thermo Scientific™ GeneRuler™ DNA Ladders	SM0334	50 µg
	SM0241	50 µg
Thermo Scientific™ TopView™ Agarose Tablets	R2801	200 tablets
	R2802	1000 tablets

## Step 5

## Molecular Cloning

Creation and transformation of recombinant plasmids into bacteria produces clones that have many copies of your gene of interest.

Thermo Scientific™ FastDigest™ Restriction Enzymes	176 Enzymes Available	
Thermo Scientific™ T4 DNA Ligase	EL0014	200 U*
	EL0011	1000 U*
Thermo Scientific™ CloneJET™ PCR Cloning Kit	K1231	20 rxns
	K1232	40 rxns

\*Weiss Units

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