

## Data Comparison between different DNA-Polymerases from Genaxxon

Product Name	Taq S	Taq E	DF-Taq	Taq Mastermix	RedTaq	RedTaq Mastermix	LongMax Kit
Cat #	M3001	M3043	M3185	M3014	M3305	M3029	M3000
5´ - 3´ polymerase	yes	yes	yes	yes	yes	yes	yes
5´ - 3´ exonuclease	yes	yes	yes	yes	yes	yes	yes
3´ - 5´ exonuclease	no	no	no	no	no	no	no
dNTPs incorporation(nucleotides/sec)	35-100	35-100	35-100	35-100	35-100	35-100	35-100
Error rate (x10 <sup>-6</sup> )	3.3	3.8	3.8	3.3	3.8	3.8	3.8
Thermostability and remaining activity at 95 ° C	40 min >50%	40 min >50%	40 min >50%	40 min >50%	40 min >50%	40 min >50%	40 min >50%
Longest amplicons	> 7 kb	10 kb	10 kb	> 7 kb	8kb	8kb	> 12 kb
Addition of poly A	yes	yes	yes	yes	yes	yes	yes
Application	High specificity PCR	High efficiency PCR	High specificity PCR	High specificity PCR	High specificity PCR	High specificity PCR	High efficiency PCR

### Remarks

M3043 is a Taq-Polymerase optimally suited for colony screens/higher yields

M3185 is a Taq-Polymerase that is tested for contaminants of 16S-DNA.

M3305 is a Taq-Polymerase that contains a red dye enabling a visualisation of the pipetting procedure.

M3029 contains a red dye. No loading buffer necessary.

M3000 contains a Taq-Polymerase and a special buffer system that enables PCR of very long fragments.

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Product name	HotStart	SuperHot	HotStart Mastermix	Pfunds	Pwo	ReproFast	KOD/ReproHot
Cat #	M3006	M3307	M3007	M3004	M3002	M3003	M3012
5´ - 3´ polymerase	yes	yes	yes	yes	yes	yes	yes
5´ - 3´ exonuclease	yes	yes	yes	yes	yes	yes	yes
3´ - 5´ exonuclease	no	no	no	yes	yes	yes	yes
dNTPs incorporation(nucleotides/sec)	30-60	35-100	35-100	-	-	-	30-60
Error rate (x10 <sup>-8</sup> )	-	4.0	4.0	0.55	0.6	0.65	0.65
Thermostability and remaining activity at 95 ° C	40 min >50%	60 min >70%	60 min >70%	90 min >70%	90 min >70%	60 min >70%	40 min >50%
Longest amplicons	10kb	8 kb	8 kb	5 kb	5 kb	> 7 kb	> 7 kb
Addition of poly A	yes	yes	yes	blunt end	blunt end	blunt end	blunt end
Application	Hot Start PCR	Hot Start PCR	High specificity PCR	High fidelity PCR	High fidelity PCR	High fidelity PCR Long PCR	High fidelity PCR Hot Start PCR

### Remarks

M3006 is a HotStart-Polymerase with separate Antibody.

M3307 is a chemically modified HotStart Polymerase without Antibody.

M3003 is a DNA-Polymerase for long fragments with very low error rate.

M3012 is a Proof-reading Polymerase with Antibody

## Data Comparison between different DNA-Polymerases

	Error Rate (x10(-6) +/- SD)	Accuracy	Percentage of Clones with Mutations (10(6)-fold amplification 1 kb
PfuUltra™ polymerase	0.4 +/- 0.04	2326000	0.9%
Pfu, PfuTurbo® polymerase	1.3 +/- 0.2	769000	2.6%
DeepVent® polymerase	2.7 +/- 0.2	370000	5.4%
Vent-R® polymerase	2.8 +/- 0.9	357000	5.6%
Platinum®, Pfx-polymerase	3.5 +/- 1.0	286000	7.0%
Taq-polymerase	3.3 +/- 0.8	303000	6.6%
ReproFast polymerase	0.65	1538000	1.3%
Pwo-polymerase	0.59	1700000	1.2%
PfuUltra™ polymerase	0.55	1818000	1.1%

Error rates were measured in recommended PCR buffer using standard cycling conditions.

Data for competitors enzymes are taken from Stratagene.

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