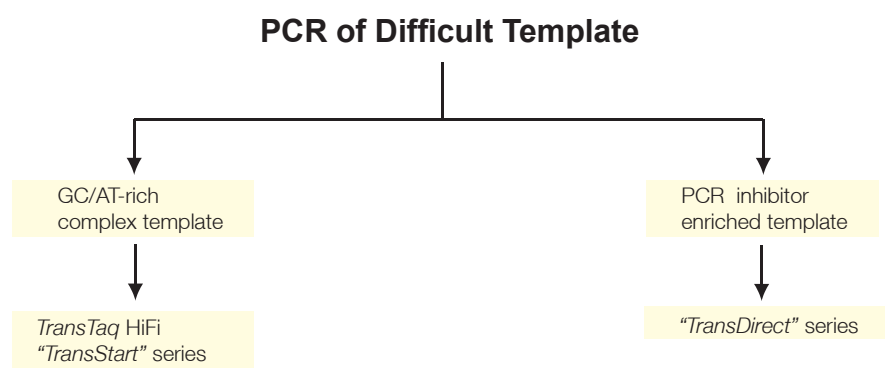
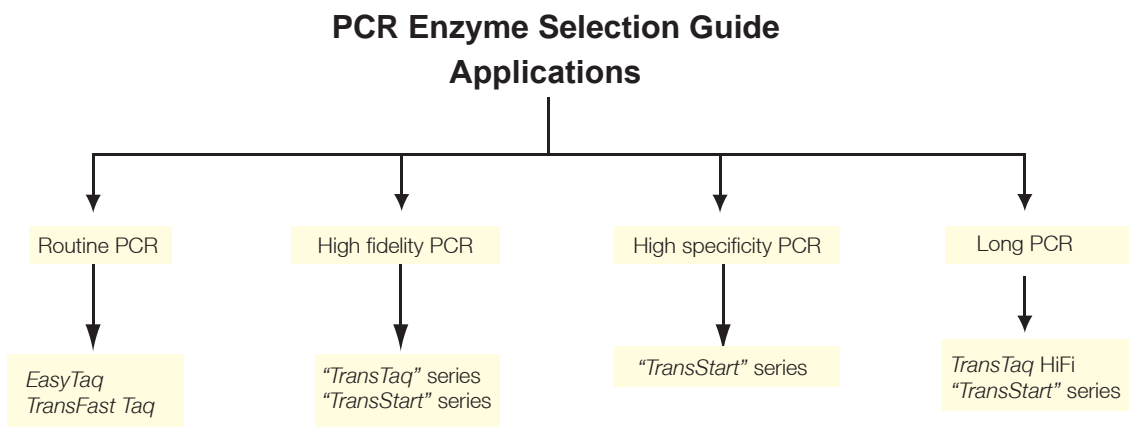




# PCR Enzymes

PCR enzymes are purified from *E. coli* strains carrying genes for specific DNA polymerase. The choice of DNA polymerase for PCR application highly depends on the characteristics of the system as well as the desired results. The following is PCR Enzyme Selection Guide.



## Feature of PCR Enzymes

PCR Enzyme	<i>TransFast</i> <sup>®</sup> <i>Taq</i>	<i>EasyTaq</i> <sup>®</sup>	<i>TransTaq</i> <sup>®</sup> -T	<i>TransTaq</i> <sup>®</sup> HiFi	<i>TransStart</i> <sup>®</sup> <i>Taq</i>	<i>TransStart</i> <sup>®</sup> <i>TopTaq</i>
Amplification Efficiency	<i>TransFast</i> <sup>®</sup> <i>Taq</i> = <i>EasyTaq</i> <sup>®</sup> < <i>TransTaq</i> <sup>®</sup> -T < <i>TransTaq</i> <sup>®</sup> HiFi < <i>TransStart</i> <sup>®</sup> <i>Taq</i> < <i>TransStart</i> <sup>®</sup> <i>TopTaq</i>					
Specificity	<i>TransFast</i> <sup>®</sup> <i>Taq</i> = <i>EasyTaq</i> <sup>®</sup> < <i>TransTaq</i> <sup>®</sup> -T < <i>TransTaq</i> <sup>®</sup> HiFi < <i>TransStart</i> <sup>®</sup> <i>Taq</i> < <i>TransStart</i> <sup>®</sup> <i>TopTaq</i>					
Fidelity (vs. <i>EasyTaq</i> <sup>®</sup> )	1x	1x	18x	18x	18x	18x
Extension Rate	6 kb/min	1-2 kb/min	1-2 kb/min	1-2 kb/min	1-2 kb/min	1-2 kb/min
Hot Start	-	-	+	+	+	+
"A" at 3' end	+	+	+	+	+	+
Product Size (human genomic DNA as template)	≤4 kb	≤4 kb	≤8 kb	≤15 kb	≤15 kb	≤15 kb

The best for life science



PCR Enzyme	<i>EasyPfu</i>	<i>TransStart® KD Plus</i>	<i>TransStart® FastPfu</i>	<i>TransStart® FastPfu Fly</i>
Amplification Efficiency	<i>EasyPfu</i> < <i>TransStart® KD Plus</i> = <i>TransStart® FastPfu</i> < <i>TransStart® FastPfu Fly</i>			
Specificity	<i>EasyPfu</i> < <i>TransStart® KD Plus</i> = <i>TransStart® FastPfu</i> < <i>TransStart® FastPfu Fly</i>			
Fidelity (vs. <i>EasyTaq®</i> )	18x	108x	54x	108x
Extension Rate	0.5 kb/min	1 kb/min	2-4 kb/min	2-6 kb/min
Hot Start	+	+	+	+
"A" at 3' end	-	-	-	-
Product Size (human genomic DNA as template)	≤6 kb	≤15 kb	≤15 kb	≤15 kb
Product Size (plasmid DNA as template)	≤10 kb	≤20 kb	≤20 kb	≤20 kb

## Applications

PCR Enzyme	Application
<i>TransFast® Taq</i> DNA Polymerase	routine PCR, fast PCR, colony PCR
<i>EasyTaq®</i> DNA Polymerase	routine PCR, colony PCR
<i>EasyTaq®</i> DNA Polymerase for PAGE	short fragment PCR
<i>TransTaq®</i> -T DNA Polymerase	complex templates, TA cloning
<i>TransTaq®</i> HiFi DNA Polymerase <i>TransStart® Taq</i> DNA Polymerase <i>TransStart® TopTaq</i> DNA Polymerase	GC/AT-rich templates, complex templates, long PCR, TA cloning
<i>TransStart® Taq</i> DNA Polymerase <i>TransStart® TopTaq</i> DNA Polymerase	GC/AT-rich templates, complex templates, qPCR, multiplex PCR, TA cloning
<i>EasyPfu</i> DNA Polymerase <i>TransStart® KD Plus</i> DNA Polymerase	high fidelity PCR, blunt cloning, site-directed mutagenesis
<i>TransStart® FastPfu</i> DNA Polymerase <i>TransStart® FastPfu Fly</i> DNA Polymerase	high fidelity PCR, fast PCR, complex templates, blunt cloning, site-directed mutagenesis