

Cleavage Efficiency Close to the Termini of PCR Fragments

Some restriction enzymes cleave poorly when the recognition sites are located close to the termini of PCR products.

The table below lists the activities of OPTIZYME* restriction enzymes when their target sites are located close to the ends of PCR products.

Part No.	Enzyme	bp from the restriction site to fragment end				
		1	2	3	4	5
BP8069	AarI	20-50		50-100		
BP8041	AatII	0	0-20	20-50	50-100	
BP8015	AluI	0-20	20-50	50-100		
BP8059	Alw44I (ApaLI)	0	20-50	50-100		
BP8025	ApaI	50-100				
BP8035	AvaI (Eco88I)	50-100				
BP8043	AvaII (Eco47I)	0	0-20	50-100		
BP8039	BalI (MscI)	0-20	50-100			
BP8005	BamHI	50-100				
BP8053	BclI	0	50-100			
BP8046	BglI	20-50	50-100			
BP8014	BglII	0	50-100			
BP8072	BpiI (BbsI)	50-100				
BP8071	Bsh1236I (BstUI)	50-100				
BP8078	BshTI (AgeI)	20-50	50-100			
BP8036	BssHII (PauI)	0	50-100			
BP8038	BstEII (Eco91I)	20-50	50-100			
BP8081	Cfr9I (XmaI)	20-50	50-100			
BP8024	Clal	50-100				
BP8068	Csp6I (CviQI)	50-100				
BP8060	DdeI (HpyF31)	20-50	50-100			
BP8009	DpnI	50-100				
BP8026	DraI	0	0-20	50-100		
BP8080	Ecl136II	50-100				
BP8066	Eco57I (AclI)	50-100				
BP8003	EcoRI	50-100				
BP8054	EcoRI (HC)	50-100				
BP8012	EcoRV (Eco32I)	20-50	50-100			
BP8070	Esp3I (BsmBI)	50-100				
BP8002	HaeIII (BsuRI)	0-20	20-50	50-100		
BP8034	HincII (HindII)	50-100				
BP8006	HindIII	0	0-20	50-100		
BP8051	HinfI	50-100				
BP8049	HpaI (KspAI)	20-50	50-100			
BP8032	HpaII (MspI)	20-50	50-100			
BP8079	Hpy8I (MjaIV)	0-20	50-100			
BP8083	KpnI	50-100				
BP8067	LguI (SapI)	50-100				
BP8021	MluI	20-50		50-100		

Part No.	Enzyme	bp from the restriction site to fragment end				
		1	2	3	4	5
BP8048	MspI (HpaII)	0-20	50-100			
BP8057	NaeI	0-20	50-100			
BP8017	NcoI	0	50-100			
BP8020	NdeI	0-20	20-50	50-100		
BP8019	NheI	0	20-50	50-100		
BP8004	NotI	20-50	50-100			
BP8058	NsiI (Mph1103I)	20-50	50-100			
BP8073	PasI	50-100				
BP8077	PfoI	0	20-50	50-100		
BP8001	PstI	0-20	50-100			
BP8050	PvuI	20-50		50-100		
BP8022	PvuII	50-100				
BP8000	RsaI	50-100				
BP8016	SacI	50-100				
BP8023	SacII (Cfr42I)	50-100				
BP8013	SalI	20-50		50-100		
BP8030	Sau3AI (Bsp143I)	50-100				
BP8037	Scal	0-20	50-100			
BP8076	SfaAI (AsiSI)	0	0-20	20-50		
BP8011	SmaI	50-100				
BP8018	SpeI (BcuI)	50-100				
BP8029	SphI (PaeI)	0	0-20	20-50	50-100	
BP8027	StuI (Eco147I)	0	50-100			
BP8007	TaqI	0	20-50	50-100		
BP8064	Tru9I (MseI)	0	0-20	50-100		
BP8055	VspI (AseI)	50-100				
BP8008	XbaI	20-50	50-100			
BP8010	XhoI	0-20	50-100			
BP8082	XmaII (AvrII)	50-100				
BP8052	XmnI (PdmI)	50-100				

Cleavage Efficiency

	0%
	0-20%
	20-50%
	50-100%