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## 10X CutEZ™ Buffer

| 产品编号  | 产品名称              | 包装  |
|-------|-------------------|-----|
| D6018 | 10X CutEZ™ Buffer | 5ml |

### 产品简介:

- 碧云天生产的10X CutEZ™ Buffer是一种能让超过200种限制性内切酶的活性达到100%的缓冲液。使用CutEZ™ Buffer, 可以免去内切酶酶切时选择buffer的麻烦, 特别是在双酶切时会变得更加简单易行。此外, 许多DNA修饰酶在CutEZ™ Buffer中也保留了100%酶活性, 这样在酶切后进行DNA修饰酶处理就无需进行DNA纯化了。
- 各种内切酶和修饰酶在1X CutEZ™ buffer中的活性, 请参考附录1和附录2。
- 不同来源的限制性内切酶对于CutEZ™ Buffer的兼容性可能略有不同。
- 1X CutEZ™ Buffer的组分为50 mM Potassium acetate, 20 mM Tris-acetate, 10 mM Magnesium acetate, 100 µg/ml BSA, pH 7.9 @ 25°C, 与NEB公司的CutSmart™ Buffer完全一致。
- 一个包装的本产品, 如果用于20µl的酶切反应体系, 共可以用于2500个酶切反应。

### 包装清单:

| 产品编号  | 产品名称              | 包装    |
|-------|-------------------|-------|
| D6018 | 10X CutEZ™ Buffer | 1ml×5 |
| —     | 说明书               | 1份    |

### 保存条件:

-20°C保存。

### 注意事项:

- 使用前, 反应缓冲液应彻底融化并混匀。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

### 使用说明:

1. 根据酶切反应体系加入总体积1/10的10X CutEZ™ Buffer, 使其终浓度为1X, 待所有组分都加入完毕, 混匀后即可置于适当的温度中进行酶切反应。

### 附录1:

常用限制性内切酶在 CutEZ™ Buffer 中的活性和效能表如下:

| Enzyme | Sequence      | % Activity in CutEZ™ | Heat Inac. | Incu. Temp. | Dam | Dcm    | CpG    | Unit Substrate |
|--------|---------------|----------------------|------------|-------------|-----|--------|--------|----------------|
| AatII  | GACGT/C       | 100                  | 80°C       | 37°C        | ●   | ●      | ■      | λ DNA          |
| Acc65I | G/GTACC       | 25                   | 65°C       | 37°C        | ●   | □ scol | □ scol | pBC4 DNA       |
| AccI   | GT/MKAC       | 100                  | 80°C       | 37°C        | ●   | ●      | □ ol   | λ DNA          |
| AciI   | CCGC(-3/-1)   | 100                  | 65°C       | 37°C        | ●   | ●      | ■      | λ DNA          |
| AclI   | AA/CGTT       | 100                  | No         | 37°C        | ●   | ●      | ■      | λ DNA          |
| AcuI   | CTGAAG(16/14) | 100                  | 65°C       | 37°C        | ●   | ●      | ●      | λ DNA          |
| AfeI   | AGC/GCT       | 100                  | 65°C       | 37°C        | ●   | ●      | ■      | pXba DNA       |
| AflII  | C/TTAAG       | 100                  | 65°C       | 37°C        | ●   | ●      | ●      | ΦX174 RF I DNA |
| AflIII | A/CRYGT       | 50                   | 80°C       | 37°C        | ●   | ●      | ●      | λ DNA          |
| AgeI   | A/CCGGT       | 75                   | 65°C       | 37°C        | ●   | ●      | ■      | λ DNA          |
| AhdI   | GACNNN/NNGTC  | 100                  | 65°C       | 37°C        | ●   | ●      | ◇ scol | λ DNA          |
| AleI   | CACNN/NNGTG   | 100                  | 80°C       | 37°C        | ●   | ●      | ◇ scol | λ DNA          |
| AluI   | AG/CT         | 100                  | 80°C       | 37°C        | ●   | ●      | ●      | λ DNA          |
| AlwI   | GGATC(4/5)    | 100                  | No         | 37°C        | ■   | ●      | ●      | λ DNA (dam-)   |
| AlwNI  | CAGNNN/CTG    | 100                  | 80°C       | 37°C        | ●   | □ ol   | ●      | λ DNA          |

|         |                           |      |      |      |      |        |        |                   |
|---------|---------------------------|------|------|------|------|--------|--------|-------------------|
| ApaI    | GGGCC/C                   | 100  | 65°C | 25°C | ●    | □ ol   | □ ol   | pXba DNA          |
| ApaLI   | G/TGCAC                   | 100  | No   | 37°C | ●    | ●      | □ ol   | λ DNA/HindIII     |
| ApeKI   | G/CWGC                    | 10   | No   | 75°C | ●    | ●      |        | λ DNA             |
| ApoI    | R/AATTY                   | 75   | 80°C | 50°C | ●    | ●      | ●      | λ DNA             |
| AscI    | GG/CGCGCC                 | 100  | 80°C | 37°C | ●    | ●      | ■      | λ DNA             |
| AseI    | AT/TAAT                   | 10   | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| AsiSI   | GCGAT/CGC                 | 100  | 80°C | 37°C | ●    | ●      | ■      | pXba/XhoI         |
| AvaI    | C/YCGRG                   | 100  | 80°C | 37°C | ●    | ●      | ■      | λ DNA             |
| AvaII   | G/GWCC                    | 100  | 80°C | 37°C | ●    | □ ol   | □ ol   | λ DNA             |
| AvrII   | C/CTAGG                   | 100  | No   | 37°C | ●    | ●      | ●      | λ DNA/HindIII     |
| BaeI    | (10/15)ACNNNNGTAYC(12/7)  | 100  | 65°C | 25°C | ●    | ●      | □ scol | pXba DNA          |
| BamHI   | G/GATCC                   | 100* | No   | 37°C | ●    | ●      | ●      | λ DNA             |
| BanI    | G/GYRCC                   | 100  | 65°C | 37°C | ●    | □ scol | □ scol | λ DNA             |
| BanII   | GRGCY/C                   | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BbsI    | GAAGAC(2/6)               | 75   | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BbvCI   | CCTCAGC(-5/-2)            | 100  | No   | 37°C | ●    | ●      | ◇ ol   | λ DNA             |
| BbvI    | GCAGC(8/12)               | 100  | 65°C | 37°C | ●    | ●      | ●      | pBR322 (dcm+) DNA |
| BccI    | CCATC(4/5)                | 100  | 65°C | 37°C | ●    | ●      | ●      | pXba DNA          |
| BceAI   | ACGGC(12/14)              | 100* | 65°C | 37°C | ●    | ●      | ■      | pBR322 (dcm+) DNA |
| BcgI    | (10/12)CGANNNNNTGC(12/10) | 50*  | 65°C | 37°C | ◇ ol | ●      | □ scol | λ DNA             |
| BciVI   | GTATCC(6/5)               | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BclI    | T/GATCA                   | 75   | No   | 50°C | ■    | ●      | ●      | λ DNA (dam-)      |
| BfaI    | C/TAG                     | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BfuAI   | ACCTGC(4/8)               | 10   | 65°C | 50°C | ●    | ●      | ◇ ol   | λ DNA             |
| BglI    | GCCNNNN/NGGC              | 10   | 65°C | 37°C | ●    | ●      | □ scol | λ DNA             |
| BglII   | A/GATCT                   | 10   | No   | 37°C | ●    | ●      | ●      | λ DNA             |
| BlpI    | GC/TNAGC                  | 100  | No   | 37°C | ●    | ●      | ●      | λ DNA             |
| BmgBI   | CACGTC(-3/-3)             | 10   | 65°C | 37°C | ●    | ●      | ■      | λ DNA             |
| BmrI    | ACTGGG(5/4)               | 100* | 65°C | 37°C | ●    | ●      | ●      | λ DNA/HindIII     |
| BmtI    | GCTAG/C                   | 100  | 65°C | 37°C | ●    | ●      | ●      | pXba DNA          |
| BpmI    | CTGGAG(16/14)             | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| Bpu10I  | CCTNAGC(-5/-2)            | 25   | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BpuEI   | CTTGAG(16/14)             | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BsaAI   | YAC/GTR                   | 100  | No   | 37°C | ●    | ●      | ■      | λ DNA             |
| BsaBI   | GATNN/NNATC               | 100  | 80°C | 60°C | □ ol | ●      | □ scol | λ DNA (dam-)      |
| BsaHI   | GR/CGYC                   | 100  | 80°C | 37°C | ●    | □ scol | ■      | λ DNA             |
| BsaI    | GGTCTC(1/5)               | 100  | 65°C | 37°C | ●    | ◇ scol | □ scol | pXba DNA          |
| BsaJI   | C/CNNGG                   | 100  | 80°C | 60°C | ●    | ●      | ●      | λ DNA             |
| BsaWI   | W/CCGGW                   | 100  | 80°C | 60°C | ●    | ●      | ●      | λ DNA             |
| BsaXI   | (9/12)ACNNNNNCTCC(10/7)   | 100  | No   | 37°C | ●    | ●      | ●      | λ DNA             |
| BseRI   | GAGGAG(10/8)              | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BseYI   | CCCAGC(-5/-1)             | 50   | 80°C | 37°C | ●    | ●      | □ ol   | λ DNA             |
| BsgI    | GTGCAG(16/14)             | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BsiEI   | CGRY/CG                   | 100  | No   | 60°C | ●    | ●      | ■      | λ DNA             |
| BsiHKAI | GWGCW/C                   | 100  | No   | 65°C | ●    | ●      | ●      | λ DNA             |
| BsiWI   | C/GTACG                   | 25   | 65°C | 55°C | ●    | ●      | ■      | ΦX174 DNA         |
| BsII    | CCNNNNN/NNGG              | 100  | No   | 55°C | ●    | □ scol | □ scol | λ DNA             |
| BsmAI   | GTCTC(1/5)                | 100  | No   | 55°C | ●    | ●      | □ scol | λ DNA             |
| BsmBI   | CGTCTC(1/5)               | 25   | 80°C | 55°C | ●    | ●      | ■      | λ DNA             |
| BsmFI   | GGGAC(10/14)              | 100  | 80°C | 65°C | ●    | □ ol   | □ ol   | pBR322 (dcm+) DNA |
| BsmI    | GAATGC(1/-1)              | 100  | 80°C | 65°C | ●    | ●      | ●      | λ DNA             |
| BsoBI   | C/YCGRG                   | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |

|          |                            |     |      |      |      |        |        |                   |
|----------|----------------------------|-----|------|------|------|--------|--------|-------------------|
| Bsp1286I | GDGCH/C                    | 100 | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BspCNI   | CTCAG(9/7)                 | 100 | 80°C | 25°C | ●    | ●      | ●      | λ DNA             |
| BspDI    | AT/CGAT                    | 100 | 80°C | 37°C | □ ol | ●      | ■      | λ DNA             |
| BspEI    | T/CCGGA                    | 10  | 80°C | 37°C | □ ol | ●      | ◆      | λ DNA (dam-)      |
| BspHI    | T/CATGA                    | 100 | 80°C | 37°C | ◇ ol | ●      | ●      | λ DNA             |
| BspMI    | ACCTGC(4/8)                | 10  | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BspQI    | GCTCTTC(1/4)               | 100 | 80°C | 50°C | ●    | ●      | ●      | λ DNA             |
| BsrBI    | CCGCTC(-3/-3)              | 100 | 80°C | 37°C | ●    | ●      | □ scol | λ DNA             |
| BsrDI    | GCAATG(2/0)                | 25  | 80°C | 65°C | ●    | ●      | ●      | λ DNA             |
| BsrFI    | R/CCGGY                    | 100 | No   | 37°C | ●    | ●      | ■      | pBR322 (dcm+) DNA |
| BsrGI    | T/GTACA                    | 25  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BsrI     | ACTGG(1/-1)                | 10  | 80°C | 65°C | ●    | ●      | ●      | ΦX174 RF I DNA    |
| BssHII   | G/CGCGC                    | 100 | 65°C | 50°C | ●    | ●      | ■      | λ DNA             |
| BssKI    | /CCNGG                     | 100 | 80°C | 60°C | ●    | □ ol   | □ ol   | λ DNA             |
| BssSI    | CACGAG(-5/-1)              | 50  | 80°C | 37°C | ●    | ●      | ●      | λ DNA             |
| BstAPI   | GCANNNN/NTGC               | 100 | 80°C | 60°C | ●    | ●      | □ scol | λ DNA             |
| BstBI    | TT/CGAA                    | 100 | No   | 65°C | ●    | ●      | ■      | λ DNA             |
| BstEII   | G/GTNACC                   | 75* | No   | 60°C | ●    | ●      | ●      | λ DNA             |
| BstNI    | CC/WGG                     | 75  | No   | 60°C | ●    | ●      | ●      | λ DNA             |
| BstUI    | CG/CG                      | 100 | No   | 60°C | ●    | ●      | ■      | λ DNA             |
| BstXI    | CCANNNNN/NTGG              | 25  | 80°C | 37°C | ●    | □ scol | ●      | λ DNA             |
| BstYI    | R/GATCY                    | 100 | No   | 60°C | ●    | ●      | ●      | λ DNA             |
| BstZ17I  | GTA/TAC                    | 100 | No   | 37°C | ●    | ●      | □ scol | λ DNA             |
| Bsu36I   | CC/TNAGG                   | 100 | 80°C | 37°C | ●    | ●      | ●      | λ DNA/HindIII     |
| BtgI     | C/CRYGG                    | 100 | 80°C | 37°C | ●    | ●      | ●      | pBR322 (dcm+) DNA |
| BtgZI    | GCGATG(10/14)              | 100 | 80°C | 60°C | ●    | ●      | ◆      | λ DNA             |
| BtsCI    | GGATG(2/0)                 | 100 | 80°C | 50°C | ●    | ●      | ●      | λ DNA             |
| BtsI     | GCAGTG(2/0)                | 100 | 80°C | 55°C | ●    | ●      | ●      | λ DNA             |
| Cac8I    | GCN/NGC                    | 100 | 65°C | 37°C | ●    | ●      | □ scol | λ DNA             |
| ClaI     | AT/CGAT                    | 100 | 65°C | 37°C | □ ol | ●      | ■      | λ DNA (dam-)      |
| CspCI    | (11/13)CAANNNNNGTGG(12/10) | 100 | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| CviAII   | C/ATG                      | 100 | 65°C | 25°C | ●    | ●      | ●      | λ DNA             |
| CviKI-1  | RG/CY                      | 100 | No   | 37°C | ●    | ●      | ●      | pBR322 (dcm+) DNA |
| CviQI    | G/TAC                      | 75* | No   | 25°C | ●    | ●      | ●      | λ DNA             |
| DdeI     | C/TNAG                     | 100 | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| DpnI     | GA/TC                      | 100 | 80°C | 37°C | ●    | ●      | □ ol   | pBR322 DNA        |
| DpnII    | /GATC                      | 25  | 65°C | 37°C | ■    | ●      | ●      | λ DNA (dam-)      |
| DraI     | TTT/AAA                    | 100 | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| DraIII   | CACNNN/GTG                 | 25  | 65°C | 37°C | ●    | ●      | ◇ ol   | λ DNA             |
| DrdI     | GACNNNN/NNGTC              | 100 | 65°C | 37°C | ●    | ●      | □ scol | pUC19 DNA         |
| EaeI     | Y/GGCCR                    | 100 | 65°C | 37°C | ●    | □ ol   | □ ol   | λ DNA             |
| EagI     | C/GGCCG                    | 10  | 65°C | 37°C | ●    | ●      | ■      | pXba DNA          |
| EarI     | CTCTTC(1/4)                | 100 | 65°C | 37°C | ●    | ●      | ◇ ol   | λ DNA             |
| EciI     | GGCGGA(11/9)               | 100 | 65°C | 37°C | ●    | ●      | □ scol | λ DNA             |
| EcoNI    | CCTNN/NNNAGG               | 100 | 65°C | 37°C | ●    | ●      | ●      | λ DNA             |
| EcoO109I | RG/GNCCY                   | 100 | 65°C | 37°C | ●    | □ ol   | ●      | λ DNA/HindIII     |
| EcoP15I  | CAGCAG(25/27)              | 100 | 65°C | 37°C | ●    | ●      | ●      | pUC19 DNA         |
| EcoRI    | G/AATTC                    | 50* | 65°C | 37°C | ●    | ●      | □ scol | λ DNA             |
| EcoRV    | GAT/ATC                    | 10  | 80°C | 37°C | ●    | ●      | ◇ scol | λ DNA             |
| FatI     | /CATG                      | 50  | 80°C | 55°C | ●    | ●      | ●      | pUC19 DNA         |
| FauI     | CCCGC(4/6)                 | 100 | 65°C | 55°C | ●    | ●      | ■      | λ DNA             |
| Fnu4HI   | GC/NGC                     | 100 | No   | 37°C | ●    | ●      | □ ol   | λ DNA             |

|           |               |     |      |      |        |        |        |                  |
|-----------|---------------|-----|------|------|--------|--------|--------|------------------|
| FokI      | GGATG(9/13)   | 100 | 65°C | 37°C | ●      | ◇ ol   | ◇ ol   | λ DNA            |
| FseI      | GGCCGG/CC     | 100 | 65°C | 37°C | ●      | ◇ scol | ■      | Adenovirus-2 DNA |
| FspI      | TGC/GCA       | 100 | No   | 37°C | ●      | ●      | ■      | λ DNA            |
| HaeII     | RGCGC/Y       | 100 | 80°C | 37°C | ●      | ●      | ■      | λ DNA            |
| HaeIII    | GG/CC         | 100 | 80°C | 37°C | ●      | ●      | ●      | λ DNA            |
| HgaI      | GACGC(5/10)   | 100 | 65°C | 37°C | ●      | ●      | ■      | ΦX174 DNA        |
| HhaI      | GCG/C         | 100 | 65°C | 37°C | ●      | ●      | ■      | λ DNA            |
| HincII    | GTY/RAC       | 100 | 65°C | 37°C | ●      | ●      | □ scol | λ DNA            |
| HindIII   | A/AGCTT       | 50  | 80°C | 37°C | ●      | ●      | ●      | λ DNA            |
| Hinfl     | G/ANTC        | 100 | 80°C | 37°C | ●      | ●      | □ scol | λ DNA            |
| HinP1I    | G/CGC         | 100 | 65°C | 37°C | ●      | ●      | ■      | λ DNA            |
| HpaI      | GTT/AAC       | 100 | No   | 37°C | ●      | ●      | □ scol | λ DNA            |
| HpaII     | C/CGG         | 100 | 80°C | 37°C | ●      | ●      | ■      | λ DNA            |
| HphI      | GGTGA(8/7)    | 100 | 65°C | 37°C | ■      | ■      | ●      | λ DNA            |
| Hpy188I   | TCN/GA        | 100 | 65°C | 37°C | □ scol | ●      | ●      | pBR322 (dcm+)    |
| Hpy99I    | CGWCG/        | 100 | 65°C | 37°C | ●      | ●      | ■      | λ DNA            |
| HpyAV     | CCTTC(6/5)    | 100 | 65°C | 37°C | ●      | ●      | ◇ ol   | λ DNA            |
| HpyCH4III | ACN/GT        | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| HpyCH4I   | A/CGT         | 100 | 65°C | 37°C | ●      | ●      | ■      | pUC19 DNA        |
| HpyCH4V   | TG/CA         | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| KasI      | G/GCGCC       | 100 | 65°C | 37°C | ●      | ●      | ■      | pBR322 DNA       |
| KpnI      | GGTAC/C       | 50* | No   | 37°C | ●      | ●      | ●      | pXba DNA         |
| MboI      | /GATC         | 100 | 65°C | 37°C | ■      | ●      | ◇ ol   | λ DNA (dam-)     |
| MboII     | GAAGA(8/7)    | 100 | 65°C | 37°C | □ ol   | ●      | ●      | λ DNA (dam-)     |
| MfeI      | C/AATTG       | 100 | No   | 37°C | ●      | ●      | ●      | λ DNA            |
| MluI      | A/CGCGT       | 25  | 80°C | 37°C | ●      | ●      | ■      | λ DNA            |
| MlyI      | GAGTC(5/5)    | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| MmeI      | TCCRAC(20/18) | 100 | 65°C | 37°C | ●      | ●      | □ ol   | ΦX174 DNA        |
| MnII      | CCTC(7/6)     | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| MscI      | TGG/CCA       | 100 | 80°C | 37°C | ●      | □ ol   | ●      | λ DNA            |
| MseI      | T/TAA         | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| MslI      | CAYNN/NNRTG   | 100 | 80°C | 37°C | ●      | ●      | ●      | λ DNA            |
| MspAII    | CMG/CKG       | 100 | 65°C | 37°C | ●      | ●      | □ ol   | λ DNA            |
| MspI      | C/CGG         | 100 | No   | 37°C | ●      | ●      | ●      | λ DNA            |
| MwoI      | GCNNNNN/NGC   | 100 | No   | 60°C | ●      | ●      | □ scol | λ DNA            |
| NaeI      | GCC/GGC       | 100 | No   | 37°C | ●      | ●      | ■      | pXba DNA         |
| NarI      | GG/CGCC       | 100 | 65°C | 37°C | ●      | ●      | ■      | pXba DNA         |
| NciI      | CC/SGG        | 100 | No   | 37°C | ●      | ●      | ◇ ol   | λ DNA            |
| NcoI      | C/CATGG       | 100 | 80°C | 37°C | ●      | ●      | ●      | λ DNA            |
| NdeI      | CA/TATG       | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| NgoMIV    | G/CCGGC       | 100 | No   | 37°C | ●      | ●      | ■      | Adenovirus-2 DNA |
| NheI      | G/CTAGC       | 100 | 65°C | 37°C | ●      | ●      | □ scol | λ DNA/HindIII    |
| NlaIII    | CATG/         | 100 | 65°C | 37°C | ●      | ●      | ●      | ΦX174 DNA        |
| NlaIV     | GGN/NCC       | 100 | 65°C | 37°C | ●      | □ ol   | □ ol   | pBR322 DNA       |
| NmeAIII   | GCCGAG(21/19) | 100 | 65°C | 37°C | ●      | ●      | ●      | ΦX174 RF I DNA   |
| NotI      | GC/GGCCGC     | 25  | 65°C | 37°C | ●      | ●      | ■      | pBC4 DNA         |
| NruI      | TCG/CGA       | 10  | No   | 37°C | □ ol   | ●      | ■      | λ DNA            |
| NsiI      | ATGCA/T       | 25  | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| NspI      | RCATG/Y       | 100 | 65°C | 37°C | ●      | ●      | ●      | λ DNA            |
| PacI      | TTAAT/TAA     | 100 | 65°C | 37°C | ●      | ●      | ●      | pNEB193 DNA      |
| PaeR7I    | C/TCGAG       | 100 | No   | 37°C | ●      | ●      | ■      | λ DNA/HindIII    |
| PciI      | A/CATGT       | 50* | 80°C | 37°C | ●      | ●      | ●      | pXba DNA         |

|         |                |      |      |      |      |        |        |                      |
|---------|----------------|------|------|------|------|--------|--------|----------------------|
| PfiFI   | GACN/NNGTC     | 100  | 65°C | 37°C | ●    | ●      | ●      | pBC4 DNA             |
| PfiMI   | CCANNN/NTGG    | 50   | 65°C | 37°C | ●    | □ ol   | ●      | λ DNA                |
| PhoI    | GG/CC          | 100  | No   | 75°C | ●    | ◇ scol | ◇ scol | λ DNA                |
| PleI    | GAGTC(4/5)     | 100  | 65°C | 37°C | ●    | ●      | □ scol | λ DNA                |
| PmeI    | GTTT/AAAC      | 100  | 65°C | 37°C | ●    | ●      | □ scol | λ DNA                |
| PmlI    | CAC/GTG        | 100  | 65°C | 37°C | ●    | ●      | ■      | λ DNA/HindIII        |
| PpuMI   | RG/GWCCY       | 100  | No   | 37°C | ●    | □ ol   | ●      | λ DNA/HindIII        |
| PshAI   | GACNN/NNGTC    | 100  | 65°C | 37°C | ●    | ●      | □ scol | λ DNA                |
| PsiI    | TTA/TAA        | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| PspGI   | /CCWGG         | 100  | No   | 75°C | ●    | ■      | ●      | T7 DNA               |
| PspOMI  | G/GGCCC        | 100  | 65°C | 37°C | ●    | ◇ scol | □ ol   | pXba DNA             |
| PspXI   | VC/TCGAGB      | 100  | No   | 37°C | ●    | ●      | ◇      | λ DNA/HindIII        |
| PstI    | CTGCA/G        | 50*  | 80°C | 37°C | ●    | ●      | ●      | λ DNA                |
| PvuI    | CGAT/CG        | 10   | No   | 37°C | ●    | ●      | ■      | pXba DNA             |
| PvuII   | CAG/CTG        | 100* | No   | 37°C | ●    | ●      | ●      | λ DNA                |
| RsaI    | GT/AC          | 100  | No   | 37°C | ●    | ●      | □ scol | λ DNA                |
| RsrII   | CG/GWCCG       | 100  | 65°C | 37°C | ●    | ●      | ■      | λ DNA                |
| SacI    | GAGCT/C        | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA/HindIII        |
| SacII   | CCGC/GG        | 100  | 65°C | 37°C | ●    | ●      | ■      | pXba DNA             |
| Sall    | G/TCGAC        | 10   | 65°C | 37°C | ●    | ●      | ■      | λ DNA/HindIII        |
| SapI    | GCTCTTC(1/4)   | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| Sau3AI  | /GATC          | 100  | 65°C | 37°C | ●    | ●      | □ ol   | λ DNA                |
| Sau96I  | G/GNCC         | 100  | 65°C | 37°C | ●    | □ ol   | □ ol   | λ DNA                |
| SbfI    | CCTGCA/GG      | 100  | 80°C | 37°C | ●    | ●      | ●      | λ DNA                |
| Scal    | AGT/ACT        | N/R  | 80°C | 37°C | ●    | ●      | ●      | λ DNA                |
| ScrFI   | CC/NGG         | 100  | 65°C | 37°C | ●    | □ ol   | □ ol   | λ DNA                |
| SexAI   | A/CCWGGT       | 100  | 65°C | 37°C | ●    | ■      | ●      | pBC4 DNA (dcm-)      |
| SfaNI   | GCATC(5/9)     | 25   | 65°C | 37°C | ●    | ●      | ◇ scol | ΦX174 RF I DNA       |
| SfcI    | C/TRYAG        | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| SfiI    | GGCCNNNN/NGGCC | 100  | No   | 50°C | ●    | ◇ ol   | □ scol | Adenovirus-2 DNA     |
| SfoI    | GGC/GCC        | 100  | No   | 37°C | ●    | □ scol | ■      | λ DNA/HindIII        |
| SgrAI   | CR/CCGGYG      | 100  | 65°C | 37°C | ●    | ●      | ■      | λ DNA                |
| SmaI    | CCC/GGG        | 100  | 65°C | 25°C | ●    | ●      | ■      | λ DNA                |
| SmlI    | C/TYRAG        | 100  | No   | 55°C | ●    | ●      | ●      | λ DNA                |
| SnaBI   | TAC/GTA        | 100  | 80°C | 37°C | ●    | ●      | ■      | T7 DNA               |
| SpeI    | A/CTAGT        | 100  | 80°C | 37°C | ●    | ●      | ●      | Adenovirus-2 DNA     |
| SphI    | GCATG/C        | 100  | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| SspI    | AAT/ATT        | 50   | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| StuI    | AGG/CCT        | 100  | No   | 37°C | ●    | □ ol   | ●      | λ DNA                |
| StyD4I  | /CCNGG         | 100  | 65°C | 37°C | ●    | □ ol   | ◇ ol   | λ DNA                |
| StyI    | C/CWWGG        | 10   | 65°C | 37°C | ●    | ●      | ●      | λ DNA                |
| SwaI    | ATTT/AAAT      | 10   | 65°C | 25°C | ●    | ●      | ●      | M13mp19 RF I DNA     |
| TaqαI   | T/CGA          | 100  | 80°C | 65°C | □ ol | ●      | ●      | λ DNA                |
| TfiI    | G/AWTC         | 100  | No   | 65°C | ●    | ●      | □ scol | λ DNA                |
| TliI    | C/TCGAG        | 50   | No   | 75°C | ●    | ●      | ◇      | λ DNA/HindIII        |
| TseI    | G/CWGC         | 100  | No   | 65°C | ●    | ●      | □ scol | λ DNA                |
| Tsp45I  | /GTSAC         | 100  | No   | 65°C | ●    | ●      | ●      | λ DNA                |
| Tsp509I | /AATT          | N/R  | No   | 65°C | ●    | ●      | ●      | λ DNA                |
| TspMI   | C/CCGGG        | 100  | No   | 75°C | ●    | ●      | ■      | pUCAdeno             |
| TspRI   | NNCASTGNN/     | 100  | No   | 65°C | ●    | ●      | ●      | λ DNA                |
| Tth111I | GACN/NNGTC     | 100  | No   | 65°C | ●    | ●      | ●      | pBC4 DNA             |
| XbaI    | T/CTAGA        | 100  | 65°C | 37°C | □ ol | ●      | ●      | λ DNA(dam-)/Hind III |

|      |                  |     |      |      |   |   |   |                  |
|------|------------------|-----|------|------|---|---|---|------------------|
| XcmI | CCANNNNN/NNNNTGG | 100 | 65°C | 37°C | ● | ● | ● | λ DNA            |
| XhoI | C/TCGAG          | 100 | 65°C | 37°C | ● | ● | ◆ | λ DNA/HindIII    |
| XmaI | C/CCGGG          | 100 | 65°C | 37°C | ● | ● | ◆ | Adenovirus-2 DNA |
| XmnI | GAANN/NNTTC      | 100 | 65°C | 37°C | ● | ● | ● | λ DNA            |
| ZraI | GAC/GTC          | 100 | 80°C | 37°C | ● | ● | ■ | λ DNA            |

注：\*，在此 buffer 中可能产生星号活性。λ DNA/HindIII:λ DNA digested with HindIII.

- 不敏感
- 完全阻断
- ol 重叠性阻断
- scol 某些重叠组合后被阻断
- ◆ 部分阻断
- ◆ ol 重叠性部分阻断
- ◆ scol 某些重叠组合后被部分阻断

## 附录2:

DNA 修饰酶在 CutEZ™ Buffer 中的活性表格如下:

| Enzyme                                   | % Activity in CutEZ™ | Required Supplements |
|--|----------------------|----------------------|
| Alkaline Phosphatase(CIP)                | 100                  | -                    |
| Antarctic Phosphatase                    | 100                  | Zn <sup>2+</sup>     |
| Bst DNA Polymerase                       | 100                  | -                    |
| CpG Methyltransferase(M.SssI)            | 100                  | -                    |
| DNA Polymerase I                         | 100                  | -                    |
| DNA Polymerase I , Large(klenow)Fragment | 100                  | -                    |
| DNA Polymerase Klenow Exo <sup>-</sup>   | 100                  | -                    |
| DNase I (RNase-free)                     | 100                  | Ca <sup>2+</sup>     |
| <i>E.coli</i> DNA Ligase                 | 100                  | NAD                  |
| Endonuclease III(Nth), recombinant       | 100                  | -                    |
| Endonuclease VIII                        | 100                  | -                    |
| Exonuclease III                          | 100                  | -                    |
| GpC Methyltransferase(M.CviPI)           | 0-50                 | DTT                  |
| McrBC                                    | 100                  | -                    |
| Micrococcal Nuclease                     | 100                  | -                    |
| Nuclease BAL-31                          | 100                  | -                    |
| phi29 DNA Polymerase                     | 100                  | -                    |
| RecJ <sub>f</sub>                        | 100                  | -                    |
| T3 DNA Ligase                            | 100                  | ATP+PEG              |
| T4 DNA Ligase                            | 100                  | ATP                  |
| T4 DNA Polymerase                        | 100                  | -                    |
| T4 Phage β-glucosyltransferase(T4-BGT)   | 100                  | -                    |
| T4 Polynucleotide Kinase                 | 100                  | ATP                  |
| T4 PNK(3' phosphatase minus)             | 100                  | ATP                  |
| T7 DNA Ligase                            | 100                  | ATP+PEG              |
| T7 DNA Polymerase(unmodified)            | 100                  | -                    |
| T7 Exonuclease                           | 100                  | -                    |
| USER Enzyme, recombinant                 | 100                  | -                    |

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