

## List of Isozymes

| Sl.No. | GeNei™ Restriction Enzymes | Sequence        | Isozymes   |
|--------|----------------------------|-----------------|--|
| 1.     | <i>Apa</i> I               | GGG CC↓C        | <i>Bsp</i> 120 I, <i>Psp</i> OM I  |
| 2.     | <i>Ava</i> I               | C↓PyCGPuG       | <i>Eco</i> 88 I  |
| 3.     | <i>Bst</i> E II            | G ↓GTNACC       | <i>Bst</i> P I, <i>Eco</i> 91 I, <i>Eco</i> 065 I, <i>Psp</i> E I  |
| 4.     | <i>Cla</i> I               | AT↓CGAT         | <i>Ban</i> III, <i>Bsa</i> 29 I, <i>Bsc</i> I, <i>Bse</i> C I, <i>Bsi</i> X I, <i>Bsp</i> 106 I, <i>Bsp</i> D I, <i>Bsp</i> X I, <i>Bsu</i> 15 I |
| 5.     | <i>Eco</i> R V             | GAT↓ATC         | <i>Eco</i> 32 I  |
| 6.     | <i>Hae</i> III             | GG↓CC           | <i>Bsh</i> I, <i>Bsu</i> R I, <i>Pal</i> I   |
| 7.     | <i>Hha</i> I               | GCG↓C           | <i>Asp</i> LE I, <i>Cfo</i> I, <i>Hin</i> 6 I, <i>Hin</i> P 1, <i>Hsp</i> A I  |
| 8.     | <i>Hinc</i> II             | GT(T/C)↓(A/G)AC | <i>Hind</i> II   |
| 9.     | <i>Hpa</i> I               | GTT↓AAC         | <i>Bs</i> HP I, <i>Ksp</i> A I   |
| 10.    | <i>Hpa</i> II              | C↓CGG           | <i>Bsi</i> S I, <i>Hap</i> II, <i>Msp</i> I  |
| 11.    | <i>Kpn</i> I               | GGTAC↓C         | <i>Acc</i> 65 I, <i>Asp</i> 718  |
| 12.    | <i>Mbo</i> I               | ↓GATC           | <i>Bsc</i> F I, <i>Bsp</i> 143 I, <i>Dpn</i> II, <i>Kz</i> 09 I, <i>Nde</i> II, <i>Sau</i> 3A I  |
| 13.    | <i>Msp</i> I               | C↓CGG           | <i>Bsi</i> S I, <i>Hap</i> II, <i>Hpa</i> II   |
| 14.    | <i>Nae</i> I               | GCC↓GGC         | <i>Mro</i> N I, <i>Ngo</i> A IV, <i>Ngo</i> M IV   |
| 15.    | <i>Nco</i> I               | C↓CATGG         | <i>Bsp</i> 19 I  |

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| 16.    | <i>Nde</i> I               | CA↓TATG     | <i>Fau</i> ND I  |
| 17.    | <i>Not</i> I               | GC↓GGCCGC   | <i>Cci</i> N I   |
| 18.    | <i>Nhe</i> I               | G↓CTAGC     | <i>Asu</i> NH I  |
| 19.    | <i>Nsi</i> I               | ATGCA↓T     | <i>Eco</i> T22 I, <i>Mph</i> 1103 I, <i>Ppu</i> 10 I, <i>Zsp</i> 2 I                           |
| 20.    | <i>Nru</i> I               | TCG↓CGA     | <i>Bsp</i> 68 I  |
| 21.    | <i>Pvu</i> I               | CGAT↓CG     | <i>Bsp</i> C I, <i>Ple</i> 19 I  |
| 22.    | <i>Sac</i> I               | GAGCT↓C     | <i>Ecl</i> 136 II, <i>Eco</i> ICR I, <i>Psp</i> 124B I, <i>Sst</i> I                           |
| 23.    | <i>Sau</i> 3A I            | ↓GATC       | <i>Bsc</i> F I, <i>Bsp</i> 143 I, <i>Dpn</i> II, <i>Kzo</i> 9 I, <i>Mbo</i> I<br><i>Nde</i> II |
| 24.    | <i>Sma</i> I               | CCC↓GGG     | <i>Cfr</i> 9 I, <i>Psp</i> A I, <i>Xma</i> I, <i>Xma</i> C I                                   |
| 25.    | <i>Sna</i> B I             | TAC↓GTA     | <i>Bst</i> SN I, <i>Eco</i> 105 I  |
| 26.    | <i>Spe</i> I               | A↓CTAGT     | <i>Ac</i> N I, <i>Bcu</i> I  |
| 27.    | <i>Stu</i> I               | AGG↓CCT     | <i>Aat</i> I, <i>Eco</i> 147 I, <i>Pme</i> 55 I, <i>Sse</i> B I                                |
| 28.    | <i>Taq</i> I               | T↓CGA       | <i>Tth</i> HB8 I   |
| 29.    | <i>Xho</i> I               | C↓TCGAG     | <i>Pae</i> R7 I, <i>Sfr</i> 274 I, <i>Tli</i> I  |
| 30.    | <i>Xma</i> I               | C↓CCGGG     | <i>Cfr</i> 9 I, <i>Psp</i> A I, <i>Sma</i> I, <i>Xma</i> C I                                   |
| 31.    | <i>Xmn</i> I               | GAANN↓NNTTC | <i>Asp</i> 700 I, <i>Mro</i> X I   |

## Relative Activity of Restriction Enzymes in Bangalore Genei Assay Buffer System

| Sl.No. | Restriction Enzymes | 10X Assay Buffers |            |            |            |            |            |
|--------|---------------------|-------------------|------------|------------|------------|------------|------------|
|        |                     | A                 | B          | C          | D          | E          | L          |
| 1.     | <i>Alu</i> I        | 50                | 75         | <b>100</b> | —          | 100        | 100        |
| 2.     | <i>Apa</i> I        | 0                 | 0          | 50         | —          | <b>100</b> | 50         |
| 3.     | <i>Ava</i> I        | 25                | 25         | 50         | —          | <b>100</b> | 25         |
| 4.     | <i>Bam</i> H I      | 25                | 50         | 50         | <b>100</b> | 50         | 50         |
| 5.     | <i>Bgl</i> I        | 100               | <b>100</b> | 75         | —          | 25         | 0          |
| 6.     | <i>Bgl</i> II       | 75                | <b>100</b> | 75         | —          | 25         | 0          |
| 7.     | <i>Bst</i> E II     | 0                 | 50         | 25         | <b>100</b> | 50         | 0          |
| 8.     | <i>Cla</i> I        | 25                | 50         | 50         | —          | <b>100</b> | 75         |
| 9.     | <i>Dra</i> I        | 50                | 50         | 50         | —          | <b>100</b> | 75         |
| 10.    | <i>Eco</i> R I      | 25                | 50         | 50         | <b>100</b> | 50         | 0          |
| 11.    | <i>Eco</i> R V      | <b>100</b>        | 75         | 50         | —          | 50         | 0          |
| 12.    | <i>Hae</i> III      | 75                | 100        | <b>100</b> | —          | 100        | 25         |
| 13.    | <i>Hha</i> I        | 75                | 100        | 100        | —          | <b>100</b> | 50         |
| 14.    | <i>Hinc</i> II      | 50                | <b>100</b> | 50         | —          | 100        | 0          |
| 15.    | <i>Hind</i> III     | 0                 | 0          | 25         | <b>100</b> | 25         | 0          |
| 16.    | <i>Hinf</i> I       | 100               | 100        | <b>100</b> | —          | 50         | 50         |
| 17.    | <i>Hpa</i> I        | 0                 | 0          | 0          | —          | <b>100</b> | 25         |
| 18.    | <i>Hpa</i> II       | 0                 | 25         | 50         | —          | 75         | <b>100</b> |
| 19.    | <i>Kpn</i> I        | 0                 | 0          | 75         | —          | 50         | <b>100</b> |
| 20.    | <i>Mbo</i> I        | 50                | <b>100</b> | 50         | —          | 50         | 0          |
| 21.    | <i>Mlu</i> I        | 50                | 50         | 25         | <b>100</b> | 0          | 0          |
| 22.    | <i>Msp</i> I        | 25                | 75         | <b>100</b> | —          | 100        | 100        |

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| Sl.No. | Restriction Enzymes | 10X Assay Buffers |            |            |            |            |            |
|--------|---------------------|-------------------|------------|------------|------------|------------|------------|
|        |                     | A                 | B          | C          | D          | E          | L          |
| 23.    | <i>Nae</i> I        | 0                 | 25         | 50         | —          | <b>100</b> | 100        |
| 24.    | <i>Nco</i> I        | 50                | 100        | 100        | —          | <b>100</b> | 50         |
| 25.    | <i>Not</i> I        | <b>100</b>        | 100        | 75         | —          | 0          | 0          |
| 26.    | <i>Nhe</i> I        | 0                 | 0          | <b>100</b> | —          | 100        | 100        |
| 27.    | <i>Nsi</i> I        | 50                | 50         | 25         | <b>100</b> | 25         | 0          |
| 28.    | <i>Nru</i> I        | 50                | 50         | 0          | <b>100</b> | 50         | 0          |
| 29.    | <i>Pst</i> I        | 50                | 50         | 50         | <b>100</b> | 25         | 50         |
| 30.    | <i>Pvu</i> I        | 100               | <b>100</b> | 50         | —          | 75         | 0          |
| 31.    | <i>Pvu</i> II       | 0                 | 25         | <b>100</b> | —          | 50         | 25         |
| 32.    | <i>Sac</i> I        | 25                | 25         | 50         | —          | 100        | <b>100</b> |
| 33.    | <i>Sal</i> I        | <b>100</b>        | 50         | 0          | —          | 0          | 0          |
| 34.    | <i>Sau</i> 3A I     | 25                | 25         | 25         | —          | <b>100</b> | 75         |
| 35.    | <i>Sfi</i> I        | 50                | 50         | 0          | —          | <b>100</b> | 0          |
| 36.    | <i>Sma</i> I        | 0                 | 0          | 0          | —          | <b>100</b> | 0          |
| 37.    | <i>Sna</i> B I      | 0                 | 0          | 30         | —          | <b>100</b> | 0          |
| 38.    | <i>Spe</i> I        | 50                | 50         | <b>100</b> | —          | 100        | 100        |
| 39.    | <i>Ssp</i> I        | 25                | <b>100</b> | 100        | —          | 100        | 0          |
| 40.    | <i>Stu</i> I        | 25                | 75         | <b>100</b> | —          | 100        | 25         |
| 41.    | <i>Taq</i> I        | 0                 | 75         | 50         | <b>100</b> | 75         | 50         |
| 42.    | <i>Xba</i> I        | 0                 | 0          | <b>100</b> | —          | 100        | 0          |
| 43.    | <i>Xho</i> I        | 100               | 100        | 100        | —          | <b>100</b> | 25         |
| 44.    | <i>Xma</i> I        | 0                 | 0          | 100        | —          | 100        | <b>100</b> |

## NOTE:

- Bangalore Genei supplies the buffers that are typed in italics and bold with the respective enzymes.
- In case of *Eco*R I and *Hind* III, the percentage activity is reported with respect to the unique buffer supplied
- Chart serves as a guide to choose the compatible buffer for double digestion.