



LOCUS NFkB-TA-Lu 9486 bp DNA circular 24-OCT-2013

SOURCE

ORGANISM

COMMENT This file is created by Vector NTI  
<http://www.informaxinc.com/>  
COMMENT ORIGDB|GenBank  
COMMENT VNTDATE|525266453|  
COMMENT VNTDBDATE|676728237|  
COMMENT LSOWNER|  
COMMENT VNTNAME|NFkB-TA-Luciferase-UBC-dTomato-W|  
COMMENT VNTAUTHORNAME|Darrell Kotton|  
COMMENT VNTAUTHOREML|dkotton@bu.edu|

FEATURES Location/Qualifiers  
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| Acc16I (3)  | tgcgca      | 4487, 5213, 7650 |
| AccIII (3)  | tccgga      | 314, 3064, 3580  |
| AfeI (3)    | agcgct      | 4081, 5084, 5810 |
| AhdI (3)    | gacnnnnngtc | 4620, 5346, 7875 |
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| AleI (3)    | cacnnnnngtg | 1583, 5068, 5794 |
| Alw44I (3)  | gtgcac      | 6091, 7203, 8449 |
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|              |             |                  |
|--------------|-------------|------------------|
| AssI (3)     | agtact      | 319, 2532, 7392  |
| AvII (3)     | tgcgca      | 4487, 5213, 7650 |
| BbvAIII (3)  | tccgga      | 314, 3064, 3580  |
| Bli736I (3)  | ggtctc      | 461, 6599, 7803  |
| BpII (3)     | gagnnnnnctc | 686, 3980, 8991  |
| BpoAI (3)    | attaat      | 7699, 8934, 9116 |
| BsaI (3)     | ggtctc      | 461, 6599, 7803  |
| Bse3DI (3)   | gcaatg      | 6130, 7816, 7634 |
| BseAI (3)    | tccgga      | 314, 3064, 3580  |
| BseMI (3)    | gcaatg      | 6130, 7816, 7634 |
| BsgI (3)     | gtgcag      | 1280, 1409, 2096 |
| BsiMI (3)    | tccgga      | 314, 3064, 3580  |
| Bso31I (3)   | ggtctc      | 461, 6599, 7803  |
| Bsp13I (3)   | tccgga      | 314, 3064, 3580  |
| Bsp19I (3)   | ccatgg      | 2367, 4859, 5585 |
| BspEI (3)    | tccgga      | 314, 3064, 3580  |
| BspMII (3)   | tccgga      | 314, 3064, 3580  |
| BspOVI (3)   | gacnnnnngtc | 4620, 5346, 7875 |
| BspTNI (3)   | ggtctc      | 461, 6599, 7803  |
| BsrDI (3)    | gcaatg      | 6130, 7816, 7634 |
| Bsu23I (3)   | tccgga      | 314, 3064, 3580  |
| CauB3I (3)   | tccgga      | 314, 3064, 3580  |
| Ceql (3)     | gatatc      | 39, 118, 337     |
| Dpal (3)     | agtact      | 319, 2532, 7392  |
| Eam1105I (3) | gacnnnnngtc | 4620, 5346, 7875 |
| Ecl136II (3) | gagctc      | 493, 684, 6631   |
| EclHKI (3)   | gacnnnnngtc | 4620, 5346, 7875 |
| Eco147I (3)  | aggcct      | 4871, 5597, 9039 |
| Eco255I (3)  | agtact      | 319, 2532, 7392  |
| Eco31I (3)   | ggtctc      | 461, 6599, 7803  |
| Eco32I (3)   | gatatc      | 39, 118, 337     |
| Eco47III (3) | agcgct      | 4081, 5084, 5810 |
| Eco53kl (3)  | gagctc      | 493, 684, 6631   |

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|----------------|----------------|------------------|
| EcoA4I (3)     | ggtctc         | 461, 6599, 7803  |
| EcoICRI (3)    | gagctc         | 493, 684, 6631   |
| EcoO44I (3)    | ggtctc         | 461, 6599, 7803  |
| EcoRV (3)      | gatatc         | 39, 118, 337     |
| FdIII (3)      | tgcgca         | 4487, 5213, 7650 |
| FspI (3)       | tgcgca         | 4487, 5213, 7650 |
| FunI (3)       | agcgct         | 4081, 5084, 5810 |
| GdII (3)       | aggcct         | 4871, 5597, 9039 |
| HjaI (3)       | gatatc         | 39, 118, 337     |
| HpyCI (3)      | gatatc         | 39, 118, 337     |
| Kpn2I (3)      | tccgga         | 314, 3064, 3580  |
| M.EcoRV (3)    | gatatc         | 39, 118, 337     |
| M.MunI (3)     | caattg         | 1195, 2484, 2940 |
| M.NgoBIX (3)   | gtannnnnctc    | 348, 7214, 8496  |
| M.NmeSI (3)    | agtact         | 319, 2532, 7392  |
| M.SacI (3)     | gagctc         | 493, 684, 6631   |
| M.ScaI (3)     | agtact         | 319, 2532, 7392  |
| M.StyLTIII (3) | gagnnnnnnrtayg | 7371, 1184, 8896 |
| M.VspI (3)     | attaat         | 7699, 8934, 9116 |
| MfeI (3)       | caattg         | 1195, 2484, 2940 |
| MroI (3)       | tccgga         | 314, 3064, 3580  |
| MstI (3)       | tgcgca         | 4487, 5213, 7650 |
| MunI (3)       | caattg         | 1195, 2484, 2940 |
| MxaI (3)       | gagctc         | 493, 684, 6631   |
| NcoI (3)       | ccatgg         | 2367, 4859, 5585 |
| NruGI (3)      | gacnnnnngtc    | 4620, 5346, 7875 |
| Nsbl (3)       | tgcgca         | 4487, 5213, 7650 |
| NsiCI (3)      | gatatc         | 39, 118, 337     |
| OliI (3)       | cacnnnnngtg    | 1583, 5068, 5794 |
| PamI (3)       | tgcgca         | 4487, 5213, 7650 |
| PceI (3)       | aggcct         | 4871, 5597, 9039 |
| PinBII (3)     | tccgga         | 314, 3064, 3580  |
| Pme55I (3)     | aggcct         | 4871, 5597, 9039 |

|               |             |                  |
|---------------|-------------|------------------|
| PshBI (3)     | attaat      | 7699, 8934, 9116 |
| Psp124BI (3)  | gagctc      | 493, 684, 6631   |
| Ptal (3)      | tccgga      | 314, 3064, 3580  |
| Pun14627I (3) | tgcgca      | 4487, 5213, 7650 |
| RfIFII (3)    | agtact      | 319, 2532, 7392  |
| Sacl (3)      | gagctc      | 493, 684, 6631   |
| Sapl (3)      | gctcttc     | 1114, 3177, 8886 |
| Sarl (3)      | aggcct      | 4871, 5597, 9039 |
| Scal (3)      | agtact      | 319, 2532, 7392  |
| Snol (3)      | gtgcac      | 6091, 7203, 8449 |
| Sru30DI (3)   | aggcct      | 4871, 5597, 9039 |
| Sru4DI (3)    | attaat      | 7699, 8934, 9116 |
| SseBI (3)     | aggcct      | 4871, 5597, 9039 |
| SstI (3)      | gagctc      | 493, 684, 6631   |
| Stel (3)      | aggcct      | 4871, 5597, 9039 |
| Stul (3)      | aggcct      | 4871, 5597, 9039 |
| TaqII (3)     | gaccga      | 7353, 7512, 8851 |
| VneI (3)      | gtgcac      | 6091, 7203, 8449 |
| VpaK32I (3)   | gctcttc     | 1114, 3177, 8886 |
| Vspl (3)      | attaat      | 7699, 8934, 9116 |
| AasI (2)      | gacnnnnngtc | 3770, 8661       |
| AatII (2)     | gacgtc      | 6331, 6952       |
| AauI (2)      | tgtaca      | 2859, 5858       |
| Acc36I (2)    | acctgc      | 3767, 3776       |
| Accl (2)      | gtmkac      | 967, 2113        |
| AclI (2)      | aacgtt      | 7272, 7645       |
| AfIII (2)     | cttaag      | 523, 6661        |
| AfIII (2)     | acrygt      | 2862, 8763       |
| Ajol (2)      | ctgcag      | 4777, 5503       |
| AliAJI (2)    | ctgcag      | 4777, 5503       |
| Apil (2)      | ctgcag      | 4777, 5503       |
| Asp700 (2)    | gaannnttc   | 850, 7275        |
| Asp700I (2)   | gaannnttc   | 850, 7275        |

|               |             |            |
|---------------|-------------|------------|
| Asp713I (2)   | ctgcag      | 4777, 5503 |
| Ball (2)      | tggcca      | 4985, 5711 |
| BavAI (2)     | cagctg      | 439, 6503  |
| BavBI (2)     | cagctg      | 439, 6503  |
| BavI (2)      | cagctg      | 439, 6503  |
| BbvAI (2)     | gaannnttc   | 850, 7275  |
| Bcgl (2)      | cgannnnntgc | 7354, 3900 |
| BfrI (2)      | cttaag      | 523, 6661  |
| BfuAI (2)     | acctgc      | 3767, 3776 |
| BglI (2)      | gccnnnnggc  | 7756, 8994 |
| BloHII (2)    | ctgcag      | 4777, 5503 |
| BoxI (2)      | gacnnnngtc  | 4745, 5471 |
| Bpu10I (2)    | cctnagc     | 1430, 4138 |
| BpuB5I (2)    | cgtacg      | 4652, 5378 |
| BpuDI (2)     | cctnagc     | 1430, 4138 |
| BsiWI (2)     | cgtacg      | 4652, 5378 |
| Bsp1407I (2)  | tgtaca      | 2859, 5858 |
| Bsp153AI (2)  | cagctg      | 439, 6503  |
| Bsp63I (2)    | ctgcag      | 4777, 5503 |
| BspAII (2)    | tctaga      | 2267, 2274 |
| BspBI (2)     | ctgcag      | 4777, 5503 |
| BspM39I (2)   | cagctg      | 439, 6503  |
| BspMI (2)     | acctgc      | 3767, 3776 |
| BspO4I (2)    | cagctg      | 439, 6503  |
| BspTI (2)     | cttaag      | 523, 6661  |
| BsrGI (2)     | tgtaca      | 2859, 5858 |
| Bst98I (2)    | cttaag      | 523, 6661  |
| BstHZ55I (2)  | ccannnnntgg | 4982, 5708 |
| BstMAI (2)    | ctgcag      | 4777, 5503 |
| BstNSI (2)    | rcatgy      | 3028, 8763 |
| BstPAI (2)    | gacnnnngtc  | 4745, 5471 |
| BstPZ740I (2) | cttaag      | 523, 6661  |
| BstXI (2)     | ccannnnntgg | 4982, 5708 |

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|-------------|--------------|------------|
| BsuBI (2)   | ctgcag       | 4777, 5503 |
| BvuBI (2)   | cgtacg       | 4652, 5378 |
| CcoI (2)    | gccggc       | 1152, 6394 |
| CflI (2)    | ctgcag       | 4777, 5503 |
| Cfr42I (2)  | ccgcgg       | 4055, 6382 |
| Cfr6I (2)   | cagctg       | 439, 6503  |
| CfrA4I (2)  | ctgcag       | 4777, 5503 |
| Cfull (2)   | ctgcag       | 4777, 5503 |
| Cscl (2)    | ccgcgg       | 4055, 6382 |
| CstI (2)    | ctgcag       | 4777, 5503 |
| DmaI (2)    | cagctg       | 439, 6503  |
| DrdI (2)    | gacnnnnnngtc | 3770, 8661 |
| DseDI (2)   | gacnnnnnngtc | 3770, 8661 |
| Eae46I (2)  | ccgcgg       | 4055, 6382 |
| Ecl2zI (2)  | ctgcag       | 4777, 5503 |
| Ecl37kl (2) | ctgcag       | 4777, 5503 |
| EclI (2)    | cagctg       | 439, 6503  |
| Eco29kl (2) | ccgcgg       | 4055, 6382 |
| Eco56I (2)  | gccggc       | 1152, 6394 |
| EcoRI (2)   | gaattc       | 2034, 2299 |
| Esp4I (2)   | cttaag       | 523, 6661  |
| FblI (2)    | gtmkac       | 967, 2113  |
| FspAI (2)   | rtgcgcay     | 4488, 5214 |
| FunII (2)   | gaattc       | 2034, 2299 |
| Gall (2)    | ccgcgg       | 4055, 6382 |
| GceGLI (2)  | ccgcgg       | 4055, 6382 |
| GceI (2)    | ccgcgg       | 4055, 6382 |
| Hall (2)    | gaattc       | 2034, 2299 |
| HallI (2)   | ctgcag       | 4777, 5503 |
| HincII (2)  | gtyrac       | 3671, 7331 |
| HindII (2)  | gtyrac       | 3671, 7331 |
| HinJCI (2)  | gtyrac       | 3671, 7331 |
| Kpn378I (2) | ccgcgg       | 4055, 6382 |



|              |                |            |
|--------------|----------------|------------|
| Kpn49kl (2)  | gaattc         | 2034, 2299 |
| Kspl (2)     | ccgcg          | 4055, 6382 |
| M.Accl (2)   | gtmkac         | 967, 2113  |
| M.AclI (2)   | aacgtt         | 7272, 7645 |
| M.AfIII (2)  | acrygt         | 2862, 8763 |
| M.Bcgl (2)   | cgannnnntgc    | 7354, 3900 |
| M.BsuBI (2)  | ctgcag         | 4777, 5503 |
| M.Cfr6I (2)  | cagctg         | 439, 6503  |
| M.EcoBI (2)  | tgannnnnnntgct | 6784, 2707 |
| M.EcoRI (2)  | gaattc         | 2034, 2299 |
| M.HincII (2) | gtyrac         | 3671, 7331 |
| M.HindII (2) | gtyrac         | 3671, 7331 |
| M.KpnAI (2)  | gaannnnntgcc   | 1897, 4237 |
| M.NgoMIV (2) | gccggc         | 1152, 6394 |
| M.NspHI (2)  | rcatgy         | 3028, 8763 |
| M.NspI (2)   | rcatgy         | 3028, 8763 |
| M.PshAI (2)  | gacnnnngtc     | 4745, 5471 |
| M.PstI (2)   | ctgcag         | 4777, 5503 |
| M.PvuII (2)  | cagctg         | 439, 6503  |
| M.RsrI (2)   | gaattc         | 2034, 2299 |
| M.SauLPI (2) | gccggc         | 1152, 6394 |
| M.SsoI (2)   | gaattc         | 2034, 2299 |
| M.XbaI (2)   | tctaga         | 2267, 2274 |
| MabI (2)     | accwgg         | 4959, 5685 |
| MaeK81I (2)  | cgtacg         | 4652, 5378 |
| MhaAI (2)    | ctgcag         | 4777, 5503 |
| MIsI (2)     | tggcca         | 4985, 5711 |
| Mlu31I (2)   | tggcca         | 4985, 5711 |
| MluNI (2)    | tggcca         | 4985, 5711 |
| MroNI (2)    | gccggc         | 1152, 6394 |
| MroXI (2)    | gaannnttc      | 850, 7275  |
| MscI (2)     | tggcca         | 4985, 5711 |
| Msp20I (2)   | tggcca         | 4985, 5711 |

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|--------------|--------------|------------|
| MspCI (2)    | cttaag       | 523, 6661  |
| NaeI (2)     | gccggc       | 1152, 6394 |
| NgoAIII (2)  | ccgcgg       | 4055, 6382 |
| NgoAIV (2)   | gccggc       | 1152, 6394 |
| NgoMI (2)    | gccggc       | 1152, 6394 |
| NgoMIV (2)   | gccggc       | 1152, 6394 |
| NgoPIII (2)  | ccgcgg       | 4055, 6382 |
| NmeRI (2)    | cagctg       | 439, 6503  |
| NspHI (2)    | rcatgy       | 3028, 8763 |
| NspI (2)     | rcatgy       | 3028, 8763 |
| Pae14kl (2)  | ccgcgg       | 4055, 6382 |
| Pae17kl (2)  | cagctg       | 439, 6503  |
| Pae5kl (2)   | ccgcgg       | 4055, 6382 |
| PaeAI (2)    | ccgcgg       | 4055, 6382 |
| PaePI (2)    | ctgcag       | 4777, 5503 |
| PaeQI (2)    | ccgcgg       | 4055, 6382 |
| PauAI (2)    | rcatgy       | 3028, 8763 |
| PdII (2)     | gccggc       | 1152, 6394 |
| Pdml (2)     | gaannnnttc   | 850, 7275  |
| Pfl21I (2)   | ctgcag       | 4777, 5503 |
| Pfl23II (2)  | cgtacg       | 4652, 5378 |
| Pfl27I (2)   | rggwccy      | 1940, 3548 |
| Ppil (2)     | gaacnnnnnctc | 8072, 7229 |
| Ppu111I (2)  | gaattc       | 2034, 2299 |
| PpuAI (2)    | cgtacg       | 4652, 5378 |
| PpuMI (2)    | rggwccy      | 1940, 3548 |
| PpuXI (2)    | rggwccy      | 1940, 3548 |
| PshAI (2)    | gacnnnngtc   | 4745, 5471 |
| Psil (2)     | ttataa       | 2692, 6811 |
| Psp1406I (2) | aacgtt       | 7272, 7645 |
| Psp23I (2)   | ctgcag       | 4777, 5503 |
| Psp5II (2)   | rggwccy      | 1940, 3548 |
| PspLI (2)    | cgtacg       | 4652, 5378 |

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|----------------|----------|------------|
| PspPPI (2)     | rggwccy  | 1940, 3548 |
| PstI (2)       | ctgcag   | 4777, 5503 |
| Pun14627II (2) | cagctg   | 439, 6503  |
| PunAII (2)     | rcatgy   | 3028, 8763 |
| Pvu84II (2)    | cagctg   | 439, 6503  |
| PvuII (2)      | cagctg   | 439, 6503  |
| RleAI (2)      | cccaca   | 5048, 5774 |
| RsrI (2)       | gaattc   | 2034, 2299 |
| SacII (2)      | ccgctg   | 4055, 6382 |
| SalPI (2)      | ctgcag   | 4777, 5503 |
| SauBMKI (2)    | gccggc   | 1152, 6394 |
| SauHPI (2)     | gccggc   | 1152, 6394 |
| SauLPI (2)     | gccggc   | 1152, 6394 |
| SauNI (2)      | gccggc   | 1152, 6394 |
| SauSI (2)      | gccggc   | 1152, 6394 |
| SbfI (2)       | cctgcagg | 4778, 5504 |
| SceIII (2)     | gccggc   | 1152, 6394 |
| SchZI (2)      | ccgctg   | 4055, 6382 |
| SdaI (2)       | cctgcagg | 4778, 5504 |
| SenPT14bl (2)  | ccgctg   | 4055, 6382 |
| SexAI (2)      | accwgtt  | 4959, 5685 |
| SexBI (2)      | ccgctg   | 4055, 6382 |
| SexCI (2)      | ccgctg   | 4055, 6382 |
| SfII (2)       | ctgcag   | 4777, 5503 |
| Sfr303I (2)    | ccgctg   | 4055, 6382 |
| SgrBI (2)      | ccgctg   | 4055, 6382 |
| Slu1777I (2)   | gccggc   | 1152, 6394 |
| SplI (2)       | cgtacg   | 4652, 5378 |
| Spul (2)       | ccgctg   | 4055, 6382 |
| Srl32DII (2)   | gaattc   | 2034, 2299 |
| SrII (2)       | gccggc   | 1152, 6394 |
| Sse8387I (2)   | cctgcagg | 4778, 5504 |
| Ssol (2)       | gaattc   | 2034, 2299 |

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|--------------|-------------|------------|
| Ssp4800I (2) | tgtaca      | 2859, 5858 |
| Ssp5230I (2) | gacgtc      | 6331, 6952 |
| SspBI (2)    | tgtaca      | 2859, 5858 |
| Sst12I (2)   | ctgcag      | 4777, 5503 |
| SstII (2)    | ccgctg      | 4055, 6382 |
| SunI (2)     | cgtagc      | 4652, 5378 |
| Tsp8EI (2)   | gccnnnnnggc | 7756, 8994 |
| Vha464I (2)  | cttaag      | 523, 6661  |
| XbaI (2)     | tctaga      | 2267, 2274 |
| XceI (2)     | rcatgy      | 3028, 8763 |
| XmiI (2)     | gtmkac      | 967, 2113  |
| Xmnl (2)     | gaannnttc   | 850, 7275  |
| YenI (2)     | ctgcag      | 4777, 5503 |
| ZraI (2)     | gacgtc      | 6331, 6952 |
| AaI (1)      | cggccg      | 1150       |
| AagI (1)     | atcgat      | 5869       |
| AarI (1)     | cacctgc     | 3768       |
| Abal (1)     | tgatca      | 2949       |
| Abel (1)     | cctcagc     | 1430       |
| AccEBI (1)   | ggatcc      | 4022       |
| AcI/NI (1)   | actagt      | 2218       |
| Acpl (1)     | ttcgaa      | 2537       |
| AcvI (1)     | cacgtg      | 294        |
| Adel (1)     | cacnnngtg   | 216        |
| Afa16RI (1)  | cgatcg      | 7503       |
| Afa22MI (1)  | cgatcg      | 7503       |
| AhII (1)     | actagt      | 2218       |
| Ahyl (1)     | cccggg      | 6850       |
| Alil (1)     | ggatcc      | 4022       |
| ApaBI (1)    | gcannntgc   | 1458       |
| ApaCI (1)    | ggatcc      | 4022       |
| Asil (1)     | ggatcc      | 4022       |
| Asp10HI (1)  | ttcgaa      | 2537       |

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|-------------|-------------|------|
| AsuII (1)   | ttcgaa      | 2537 |
| AvrBII (1)  | cctagg      | 9042 |
| AvrII (1)   | cctagg      | 9042 |
| BaeI (1)    | acnnnngtayc | 4184 |
| BamHI (1)   | ggatcc      | 4022 |
| BanIII (1)  | atcgat      | 5869 |
| BbrPI (1)   | cacgtg      | 294  |
| BbuI (1)    | gcatgc      | 3028 |
| BbvAII (1)  | atcgat      | 5869 |
| BbvCI (1)   | cctcagc     | 1430 |
| Bce751I (1) | ggatcc      | 4022 |
| Bci29I (1)  | atcgat      | 5869 |
| BciBI (1)   | atcgat      | 5869 |
| BclI (1)    | tgatca      | 2949 |
| BcmI (1)    | atcgat      | 5869 |
| BcoAI (1)   | cacgtg      | 294  |
| BcuI (1)    | actagt      | 2218 |
| BdII (1)    | atcgat      | 5869 |
| Bim19I (1)  | ttcgaa      | 2537 |
| BimI (1)    | ttcgaa      | 2537 |
| Bli41I (1)  | atcgat      | 5869 |
| Bli86I (1)  | atcgat      | 5869 |
| BliRI (1)   | atcgat      | 5869 |
| BlnI (1)    | cctagg      | 9042 |
| BmgBI (1)   | cacgtc      | 4089 |
| BnaI (1)    | ggatcc      | 4022 |
| Bpu14I (1)  | ttcgaa      | 2537 |
| Bsa29I (1)  | atcgat      | 5869 |
| BsaBI (1)   | gatnnnnatc  | 5880 |
| Bscl (1)    | atcgat      | 5869 |
| Bse8I (1)   | gatnnnnatc  | 5880 |
| BseCI (1)   | atcgat      | 5869 |
| BseJI (1)   | gatnnnnatc  | 5880 |

|               |             |      |
|---------------|-------------|------|
| BsePI (1)     | gcgcg       | 717  |
| BseX3I (1)    | cggccg      | 1150 |
| Bsh1365I (1)  | gatnnnnatc  | 5880 |
| BsiBI (1)     | gatnnnnatc  | 5880 |
| BsiCI (1)     | ttcgaa      | 2537 |
| BsiQI (1)     | tgatca      | 2949 |
| BsiXI (1)     | atcgat      | 5869 |
| Bsp106I (1)   | atcgat      | 5869 |
| Bsp119I (1)   | ttcgaa      | 2537 |
| Bsp4009I (1)  | ggatcc      | 4022 |
| Bsp68I (1)    | tcgcga      | 837  |
| Bsp98I (1)    | ggatcc      | 4022 |
| BspA2I (1)    | cctagg      | 9042 |
| BspAAIII (1)  | ggatcc      | 4022 |
| BspCI (1)     | cgatcg      | 7503 |
| BspDI (1)     | atcgat      | 5869 |
| BspJII (1)    | atcgat      | 5869 |
| BspLAI (1)    | ttcgaa      | 2537 |
| BspLU11I (1)  | acatgt      | 8763 |
| BspOVII (1)   | atcgat      | 5869 |
| BspT104I (1)  | ttcgaa      | 2537 |
| BspXI (1)     | atcgat      | 5869 |
| BspXII (1)    | tgatca      | 2949 |
| BspZEI (1)    | atcgat      | 5869 |
| BsrBRI (1)    | gatnnnnatc  | 5880 |
| BssHII (1)    | gcgcg       | 717  |
| Bst28I (1)    | atcgat      | 5869 |
| BstAPI (1)    | gcannnnntgc | 1458 |
| BstBI (1)     | ttcgaa      | 2537 |
| BstBZ153I (1) | gcgcg       | 717  |
| BstI (1)      | ggatcc      | 4022 |
| BstI316I (1)  | cacnnngtg   | 216  |
| BstNZ169I (1) | atcgat      | 5869 |

|              |            |      |
|--------------|------------|------|
| BstT7I (1)   | tgatca     | 2949 |
| BstZI (1)    | cggccg     | 1150 |
| Bsu15I (1)   | atcgat     | 5869 |
| BsuTUI (1)   | atcgat     | 5869 |
| BtrI (1)     | cacgtc     | 4089 |
| Cbil (1)     | ttcgaa     | 2537 |
| Cell (1)     | ggatcc     | 4022 |
| Cfr9I (1)    | cccggg     | 6850 |
| CfrJ4I (1)   | cccggg     | 6850 |
| Clal (1)     | atcgat     | 5869 |
| Csp45I (1)   | ttcgaa     | 2537 |
| Csp68KII (1) | ttcgaa     | 2537 |
| DrallI (1)   | cacnngtg   | 216  |
| EaeAI (1)    | cccggg     | 6850 |
| EagBI (1)    | cgatcg     | 7503 |
| EagI (1)     | cggccg     | 1150 |
| EclRI (1)    | cccggg     | 6850 |
| EclXI (1)    | cggccg     | 1150 |
| Eco52I (1)   | cggccg     | 1150 |
| Eco72I (1)   | cacgtg     | 294  |
| ErhB9I (1)   | cgatcg     | 7503 |
| FauNDI (1)   | catatg     | 4432 |
| FbaI (1)     | tgatca     | 2949 |
| FseI (1)     | ggccggcc   | 1153 |
| FspII (1)    | ttcgaa     | 2537 |
| GstI (1)     | ggatcc     | 4022 |
| Ksp22I (1)   | tgatca     | 2949 |
| Lcal (1)     | atcgat     | 5869 |
| LplI (1)     | atcgat     | 5869 |
| Lspl (1)     | ttcgaa     | 2537 |
| M.BaeI (1)   | acnnngtayc | 4184 |
| M.BamHI (1)  | ggatcc     | 4022 |
| M.BbvCIA (1) | cctcagc    | 1430 |

|                 |                |      |
|-----------------|----------------|------|
| M.BbvCIB (1)    | cctcagc        | 1430 |
| M.BclI (1)      | tgatca         | 2949 |
| M.BmeTI (1)     | tgatca         | 2949 |
| M.BnaI (1)      | ggatcc         | 4022 |
| M.BseCI (1)     | atcgat         | 5869 |
| M.Bsp106I (1)   | atcgat         | 5869 |
| M.BstI (1)      | ggatcc         | 4022 |
| M.Bsu15I (1)    | atcgat         | 5869 |
| M.Cfr9I (1)     | cccggg         | 6850 |
| M.ClaI (1)      | atcgat         | 5869 |
| M.DraIII (1)    | cacnngtg       | 216  |
| M.EcoKI (1)     | aacnnnnnngtgc  | 7212 |
| M.EcoR124I (1)  | gaannnnnrctg   | 3858 |
| M.EcoR124II (1) | gaannnnnnrctg  | 2864 |
| M.NgoAV (1)     | gcannnnnnntgc  | 1425 |
| M.SmaI (1)      | cccggg         | 6850 |
| M.StySPI (1)    | aacnnnnnngtrc  | 7212 |
| M.TaeII (1)     | tgatca         | 2949 |
| M.XcmI (1)      | ccannnnnnnntgg | 3106 |
| M.XcyI (1)      | cccggg         | 6850 |
| M.XmaIII (1)    | cggccg         | 1150 |
| MamI (1)        | gatnnnatc      | 5880 |
| MlaI (1)        | ttcgaa         | 2537 |
| Mlu23I (1)      | ggatcc         | 4022 |
| MluB2I (1)      | tcgcca         | 837  |
| MvrI (1)        | cgatcg         | 7503 |
| NbII (1)        | cgatcg         | 7503 |
| NdeI (1)        | catatg         | 4432 |
| NruI (1)        | tcgcca         | 837  |
| Nsp29132II (1)  | ggatcc         | 4022 |
| NspSAIV (1)     | ggatcc         | 4022 |
| NspV (1)        | ttcgaa         | 2537 |
| OkrAI (1)       | ggatcc         | 4022 |



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|--------------|---------------|------|
| Pac25I (1)   | cccggg        | 6850 |
| PacI (1)     | ttaattaa      | 6858 |
| PaeBI (1)    | cccggg        | 6850 |
| PaeI (1)     | gcatgc        | 3028 |
| Paul (1)     | gcgcgc        | 717  |
| PciI (1)     | acatgt        | 8763 |
| PfaAll (1)   | catatg        | 4432 |
| PfaAIII (1)  | gcatgc        | 3028 |
| Pfl8I (1)    | ggatcc        | 4022 |
| Pgal (1)     | atcgat        | 5869 |
| PlalI (1)    | ttcgaa        | 2537 |
| Ple19I (1)   | cgatcg        | 7503 |
| PmaCI (1)    | cacgtg        | 294  |
| PmlI (1)     | cacgtg        | 294  |
| PpaAI (1)    | ttcgaa        | 2537 |
| PspAI (1)    | cccggg        | 6850 |
| PspALI (1)   | cccggg        | 6850 |
| Psu161I (1)  | cgatcg        | 7503 |
| PvuI (1)     | cgatcg        | 7503 |
| Rme21I (1)   | atcgat        | 5869 |
| RshI (1)     | cgatcg        | 7503 |
| RspLKI (1)   | gcatgc        | 3028 |
| RspLKII (1)  | ggatcc        | 4022 |
| SanDI (1)    | gggwccc       | 1940 |
| Sbo13I (1)   | tcgca         | 837  |
| Sdil (1)     | ggccnnnnnggcc | 8995 |
| SenPT16I (1) | cggccg        | 1150 |
| Sfil (1)     | ggccnnnnnggcc | 8995 |
| Sful (1)     | ttcgaa        | 2537 |
| SgrAI (1)    | crccggyg      | 3798 |
| Smal (1)     | cccggg        | 6850 |
| Soll (1)     | ggatcc        | 4022 |
| SpaHI (1)    | gcatgc        | 3028 |

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|---------------|---------------|------|
| SpeI (1)      | actagt        | 2218 |
| SphI (1)      | gcatgc        | 3028 |
| Spol (1)      | tcgca         | 837  |
| Sse1825I (1)  | gggwccc       | 1940 |
| Sse8647I (1)  | aggwcct       | 3548 |
| Ssp1I (1)     | ttcgaa        | 2537 |
| Ssp27144I (1) | atcgat        | 5869 |
| SspI (1)      | aatatt        | 7068 |
| SspRFI (1)    | ttcgaa        | 2537 |
| Surl (1)      | ggatcc        | 4022 |
| SvII (1)      | ttcgaa        | 2537 |
| Xcml (1)      | ccannnnnnntgg | 3106 |
| Xcyl (1)      | cccggg        | 6850 |
| XmaCI (1)     | cccggg        | 6850 |
| XmaI (1)      | cccggg        | 6850 |
| XmaIII (1)    | cggccg        | 1150 |
| XmaJI (1)     | cctagg        | 9042 |
| XorII (1)     | cgatcg        | 7503 |
| ZhoI (1)      | atcgat        | 5869 |