Gel Documentation Form and Worksheet

DPB1

(101.311-24/04 – 24u/04u) Lot No: 9G8 Expiry Date: 2021-08-01

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sample ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DNA Conc.(ng/ul):\_\_\_\_\_\_\_\_\_

Test Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tested By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Review Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_

*Interpretation:\_\_\_\_\_\_\_\_\_\_\_ Failed lanes: \_\_\_\_\_\_\_\_\_\_\_ Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Gel Picture**

|  |
| --- |
| PHOTO DOCUMENT |







‘ICB’Internal Control Band,

‘AmpS’ Amplicon Size

**Notes:**

Product sizes are approximate. For detailed information, see the lot-specific Specificity Table and Interpretation Table.

This table is intended as a guide. For interpretation always use the Interpretation Table and/or Specificity Table.

HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

Primer mixes 3, 9, 27, 43, 47 and 58 may give rise to a lower yield of HLA-specific PCR product than the other DPB1 primer mixes, most pronounced for mix 58.

Primer mixes 3, 12, 26, 38, 41 and 80 have a tendency to giving rise to primer oligomer formation.

Primer mixes 23, 25, 32, 38, 41, 42, 45, 49, 50, 62, 68, 84, 85, 89 and 93 may have tendencies of unspecific amplifications. Primer mix 96 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

 

 



















**1**DPB1 alleles listed on the IMGT/HLA web page 2018-July-10, release 3.33.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

**2**Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page <http://hla.alleles.org/alleles/deleted.html>.

**3** The following DPB1 primer mixes have two or more product sizes:

|  |  |  |
| --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified DPB1alleles |
| **11** | 145 bp  185 bp | \*69:01:01:01-69:01:01:02, 136:01, 179:01, 207:01, 303:01, 309:01, 322:01, 458:01, 644:01, 659:01  \*02:01:02:01-02:01:29, 04:01:01:01-04:01:06, 04:01:08-04:01:10, 04:01:12-04:02:13, 23:01:01-23:01:02, 24:01, 32:01, 33:01:01:01-33:01:01:05, 41:01:01:01-41:01:02, 46:01:01-46:01:02, 47:01:01:01-47:01:01:03, 51:01, 59:01, 60:01, 66:01, 71:01:01-71:01:02, 72:01:01:01-72:01:01:03, 73:01, 75:01, 77:01, 80:01, 81:01:01:01-81:01:01:02, 82:01, 83:01, 86:01, 94:01, 99:01, 105:01:01:01-105:01:01:09, 108:01, 109:01, 113:01, 115:01, 119:01, 120:01N, 121:01, 123:01, 126:01:01:01-126:01:01:02, 128:01, 129:01, 134:01, 138:01, 141:01, 143:01, 144:01, 145:01, 146:01, 149:01, 151:01, 153:01, 154:01N, 155:01:01-155:01:02, 163:01, 164:01, 169:01, 174:01, 175:01, 176:01, 177:01, 178:01, 179:01, 180:01, 181:01, 183:01, 185:01, 186:01, 187:01, 188:01, 189:01, 190:01, 191:01, 192:01, 193:01, 194:01, 195:01, 196:01, 199:01, 200:01, 210:01, 211:01, 212:01, 213:01, 214:01, 215:01, 216:01N, 217:01, 218:01N, 219:01, 224:01, 225:01, 227:01, 228:01, 229:01, 231:01, 232:01, 233:01, 235:01, 236:01:01-236:01:02, 237:01, 238:01, 239:01, 240:01, 252:01, 253:01, 254:01, 255:01, 256:01, 257:01, 258:01, 260:01, 261:01, 262:01, 263:01, 271:01, 272:01, 273:01, 275:01, 276:01, 278:01, 281:01, 282:01, 283:01, 286:01, 294:01, 297:01, 298:01, 302:01, 303:01, 306:01, 307:01, 308:01, 309:01, 310:01, 311:01, 318:01, 319:01, 320:01, 321:01, 322:01, 323:01, 334:01, 335:01, 336:01, 338:01, 339:01, 341:01, 342:01, 344:01, 350:01, 352:01, 355:01, 356:01, 357:01N, 359:01, 360:01, 364:01, 365:01, 366:01, 367:01, 368:01, 369:01, 372:01, 373:01, 374:01, 375:01, 376:01, 377:01, 378:01, 380:01, 381:01, 382:01N, 392:01, 396:01, 397:01, 399:01, 401:01N, 402:01, 414:01:01:01-414:01:01:02, 415:01, 416:01:01:01-416:01:01:02, 418:01, 419:01, 420:01, 421:01, 423:01:01-423:01:02, 424:01, 425:01, 426:01, 427:01, 428:01, 429:01, 430:01, 432:01, 433:01, 434:01, 435:01, 443:01, 444:01, 451:01, 452:01, 453:01, 455:01N, 456:01, 457:01, 459:01, 461:01, 463:01:01:01-463:01:01:03, 464:01, 465:01, 468:01, 469:01, 475:01, 476:01, 477:01, 479:01, 485:01, 486:01, 487:01, 488:01, 489:01, 494:01, 497:01, 500:01, 501:01, 502:01, 508:01, 510:01, 511:01, 520:01, 521:01, 522:01, 523:01, 524:01, 525:01, 528:01, 529:01, 534:01, 537:01, 539:01, 540:01, 549:01, 551:01N, 553:01, 554:01, 555:01, 556:01, 557:01, 559:01, 569:01, 570:01N, 571:01, 574:01, 575:01, 576:01, 577:01, 578:01, 579:01, 581:01, 582:01, 583:01, 586:01, 591:01, 592:01, 593:01, 594:01, 595:01, 596:01, 601:01, 602:01, 603:01, 604:01, 605:01, 606:01, 607:01, 614:01, 615:01, 617:01, 618:01, 620:01, 622:01, 624:01, 625:01, 626:01, 627:01, 628:01, 637:01, 639:01, 640:01, 641:01, 642:01, 643:01, 646:01, 647:01, 655:01, 656:01, 658:01, 659:01, 660:01, 665:01, 666:01, 670:01, 674:01, 677:01, 678:01, 679:01, 680:01, 681:01, 682:01, 683:01, 685:01, 687:01, 690:01, 692:01, 693:01N, 694:01, 696:01N, 699:01, 700:01N, 701:01, 702:01 |
| **14** | 105 bp  175 bp | \*02:02:01:01-02:02:01:07, 05:01:01:01-05:01:02, 05:01:04-05:01:07, 21:01, 22:01, 36:01, 38:01, 97:01, 100:01, 101:01, 114:01, 135:01, 140:01, 170:01, 171:01, 223:01, 226:01, 300:01, 301:01, 317:01, 330:01, 331:01, 395:01, 406:01, 473:01, 478:01, 495:01, 496:01, 547:01, 550:01, 560:01, 573:01, 587:01, 588:01, 589:01, 590:01, 598:01N, 611:01, 619:01, 638:01, 657:01N, 668:01:01:01-668:01:01:02, 697:01Q  \*21:01, 30:01:01:01-30:01:01:02, 36:01, 54:01, 114:01, 390:01, 408:01, 550:01, 715:01, 717:01, 718:01 |
| **16** | 80 bp  165 bp  210 bp | \*03:01:01:01-03:01:08, 04:02:01:01-04:02:01:11, 04:02:02, 04:02:03-04:02:13, 14:01:01:01-14:01:05, 18:01, 20:01:01:01-20:01:04, 25:01, 28:01, 35:01:01, 45:01, 49:01:01:01-49:01:01:03, 50:01, 51:01, 53:01, 57:01, 59:01, 60:01, 61:01N, 68:01, 70:01, 73:01, 75:01, 76:01, 77:01, 78:01, 79:01, 80:01, 82:01, 83:01, 91:01:01:01-91:01:01:02, 92:01, 98:01, 104:01:01:01-104:01:01:05, 105:01:01:01-105:01:01:09, 108:01, 111:01, 116:01, 119:01, 122:01, 124:01:01:01-124:01:01:02, 129:01, 130:01, 132:01, 143:01, 144:01, 153:01, 164:01, 183:01, 184:01, 185:01, 197:01, 203:01:01-203:01:02, 210:01, 214:01, 219:01, 221:01, 222:01, 242:01, 243:01, 248:01, 252:01, 256:01, 257:01, 259:01, 260:01, 263:01, 270:01, 271:01, 274:01, 285:01, 286:01, 292:01, 293:01, 296:01, 307:01, 308:01, 312:01, 316:01, 321:01, 329:01, 338:01, 342:01, 351:01, 355:01, 363:01, 364:01, 365:01, 368:01, 369:01, 373:01, 374:01, 379:01, 380:01, 383:01, 385:01, 391:01, 394:01, 402:01, 404:01, 405:01, 409:01, 420:01, 424:01, 429:01, 431:01, 439:01, 442:01, 443:01, 445:01, 446:01, 463:01:01:01-463:01:01:03, 466:01, 472:01, 477:01, 484:01w, 488:01, 491:01, 492:01, 494:01, 498:01, 499:01, 506:01, 507:01N, 508:01, 509:01, 525:01, 532:01, 536:01, 539:01, 540:01, 545:01, 548:01, 549:01w, 568:01, 571:01, 572:01, 574:01, 577:01, 586:01, 594:01, 595:01, 596:01, 605:01, 606:01, 610:01, 613:01, 620:01, 621:01, 624:01, 627:01, 629:01, 645:01, 646:01, 647:01, 648:01:01:01-648:01:01:02, 651:01, 664:01, 665:01, 669:01, 671:01, 674:01, 675:01, 676:01, 688:01, 689:01, 690:01, 691:01N, 693:01N, 701:01, 704:01, 705:01, 706:01, 712:01N  \*99:01, 220:01  \*127:01 |
| **23** | 145 bp    210 bp | \*05:01:01:01, 05:01:01:02w-05:01:01:10w, 05:01:02, 05:01:03w-05:01:07w, 34:01:01:01-34:01:02, 36:01, 38:01, 62:01, 63:01, 97:01, 100:01, 112:01, 114:01, 116:01, 135:01w, 140:01, 170:01, 171:01, 223:01w, 226:01w, 300:01w, 301:01w, 317:01w, 330:01w, 331:01, 333:01w, 394:01w, 395:01w, 473:01w, 484:01, 560:01w, 573:01w, 580:01, 587:01w, 589:01w, 598:01Nw, 599:01w, 611:01w, 619:01w, 638:01w, 657:01Nw, 668:01:01:01w-668:01:01:02w, 697:01Qw  \*127:01, 383:01 |
| **24** | 195 bp  265 bp | \*101:01  \*05:01:01:01-05:01:07, 08:01, 16:01:01-16:01:02, 19:01:01:01-19:01:01:02, 22:01, 31:01, 38:01, 57:01, 63:01, 65:01:01-65:01:02, 68:01, 84:01, 97:01, 102:01, 103:01, 106:01, 135:01, 140:01, 147:01, 150:01, 152:01, 165:01, 166:01, 170:01, 171:01, 173:01, 182:01, 184:01, 226:01, 234:01, 259:01, 277:01, 284:01, 285:01, 300:01, 301:01, 304:01, 305:01, 317:01, 331:01, 337:01, 340:01, 358:01, 379:01, 395:01, 398:01, 400:01, 422:01, 442:01, 466:01, 473:01, 495:01, 527:01, 533:01, 535:01, 538:01, 558:01, 560:01, 573:01, 587:01, 588:01, 598:01N, 611:01, 619:01, 638:01, 648:01:01:01-648:01:01:02, 652:01, 653:01, 657:01N, 668:01:01:01-668:01:01:02, 684:01, 697:01Q, 720:01 |
| **25** | 200 bp  265 bp | \*05:01:01:01-05:01:07, 21:01, 22:01, 36:01, 38:01, 44:01, 58:01, 63:01, 97:01, 114:01, 135:01, 140:01, 170:01, 171:01, 220:01, 223:01, 226:01, 265:01, 300:01, 301:01, 317:01, 331:01, 384:01, 394:01, 395:01, 473:01, 495:01, 550:01, 560:01, 563:01, 573:01, 587:01, 588:01, 598:01N, 599:01, 611:01, 619:01, 630:01, 638:01, 657:01N, 668:01:01:01-668:01:01:02, 697:01Q  \*70:01 |
| **26** | 75 bp  205 bp | \*06:01:01:01-06:01:05, 09:01:01-09:01:04, 17:01:01:01-17:01:01:02, 29:01, 44:01, 46:01:01-46:01:02, 64:01N, 86:01, 88:01, 101:01, 131:01:01-131:01:02, 152:01, 156:01, 157:01, 161:01N, 166:01, 168:01, 182:01, 208:01, 234:01, 235:01, 241:01, 245:01, 249:01, 251:01, 266:01, 287:01, 288:01, 289:01, 332:01, 343:01, 361:01, 384:01, 386:01, 407:01, 413:01, 447:01, 460:01, 504:01, 505:01, 530:01, 546:01, 555:01, 566:01, 567:01, 581:01, 601:01, 630:01, 662:01, 684:01, 698:01, 714:01, 719:01  \*123:01 |
| **27** | 95 bp  215 bp  240 bp | \*06:01:01:01-06:01:05, 17:01:01:01-17:01:01:02, 20:01:01:01-20:01:04, 46:01:01-46:01:02, 64:01N, 69:01:01:01-69:01:01:02, 80:01, 86:01, 91:01:01:01-91:01:01:02, 98:01, 108:01, 130:01, 131:01:01-131:01:02, 152:01, 156:01, 161:01N, 164:01, 166:01, 168:01, 182:01, 197:01, 205:01, 208:01, 214:01, 235:01, 241:01, 245:01, 251:01, 259:01, 287:01, 292:01, 332:01, 343:01, 355:01, 361:01, 379:01, 384:01, 407:01, 413:01, 447:01, 460:01, 484:01, 530:01, 540:01, 546:01, 555:01, 566:01, 567:01, 581:01, 601:01, 613:01, 662:01, 684:01 698:01, 719:01  \*169:01, 252:01, 582:01  \*15:01:01, 18:01, 89:01, 158:01, 198:01, 199:01, 200:01, 219:01, 246:01, 247:01, 290:01, 292:01, 345:01, 347:01, 369:01, 387:01, 471:01, 480:01, 482:01, 493:01, 561:01, 585:01, 608:01, 644:01 |
| **28** | 200 bp  260 bp | \*09:01:01-09:01:04, 10:01:01:01-10:01:03, 13:01:01:01, 13:01:01:02-13:01:01:06w, 13:01:02, 17:01:01:01-17:01:01:02, 21:01, 26:01:01-26:01:02, 26:01:03, 27:01, 30:01:01:01-30:01:01:02, 35:01:01, 36:01, 37:01, 54:01, 55:01:01:01-55:01:01:02, 58:01, 66:01, 79:01, 85:01:01:01, 85:01:01:02-85:01:02, 86:01, 88:01, 93:01, 98:01, 107:01, 109:01, 110:01, 113:01, 117:01, 125:01, 129:01, 131:01:01-131:01:02, 132:01, 133:01, 137:01, 156:01, 157:01, 160:01, 168:01, 206:01, 209:01, 241:01, 244:01, 245:01, 251:01, 265:01, 269:01, 271:01, 287:01, 288:01, 289:01, 294:01, 295:01, 312:01, 313:01, 314:01, 324:01, 325:01, 343:01, 344:01, 361:01, 362:01, 370:01, 384:01, 386:01, 389:01, 390:01, 392:01, 393:01, 407:01, 408:01, 410:01, 412:01, 413:01, 438:01, 447:01, 448:01, 449:01, 460:01, 470:01, 490:01, 503:01, 504:01, 505:01, 514:01, 515:01, 518:01, 519:01, 530:01, 532:01, 540:01, 541:01, 544:01, 550:01, 552:01, 562:01, 563:01, 564:01, 565:01, 597:01, 600:01, 609:01, 612:01, 613:01, 621:01, 623:01, 630:01, 633:01, 634:01, 635:01, 636:01, 650:01, 663:01, 673:01, 698:01, 703:01, 708:01, 709:01, 713:01, 714:01, 716:01, 717:01, 719:01  \*119:01 |
| **29** | 105 bp  160 bp  220 bp | \*141:01  \*617:01, 699:01  \*09:01:01-09:01:04, 10:01:01:01-10:01:03, 17:01:01:01-17:01:01:02, 30:01:01:01-30:01:01:02, 54:01, 55:01:01:01-55:01:01:02, 58:01, 86:01, 113:01, 131:01:01-131:01:02, 137:01, 156:01, 157:01, 167:01, 168:01, 241:01, 245:01, 265:01, 266:01, 287:01, 288:01, 289:01, 313:01, 314:01, 324:01, 325:01, 343:01, 344:01, 361:01, 384:01, 386:01, 407:01, 408:01, 410:01, 447:01, 460:01, 470:01, 503:01, 504:01, 505:01, 514:01, 515:01, 530:01, 630:01, 650:01, 673:01, 698:01, 714:01, 716:01, 719:01 |
| **31** | 120 bp  215 bp | \*01:01:01:01-01:01:06, 05:01:01:01-05:01:02, 05:01:04-05:01:07, 08:01, 10:01:01:01-10:01:02, 11:01:01:01-11:01:04, 13:01:01:01-13:01:02, 16:01:01-16:01:02, 19:01:01:01-19:01:01:02, 21:01, 22:01, 25:01, 26:01:01-26:01:03, 27:01, 30:01:01:01-30:01:01:02, 31:01, 36:01, 37:01, 38:01, 45:01, 52:01, 54:01, 55:01:01:01-55:01:01:02, 56:01, 58:01, 63:01, 65:01:01-65:01:02, 67:01, 68:01, 79:01, 84:01, 85:01:01:01-85:01:02, 87:01, 89:01, 90:01:01-90:01:02, 93:01, 97:01, 102:01, 103:01, 106:01, 107:01, 110:01, 114:01, 118:01, 122:01, 125:01, 127:01, 133:01, 135:01, 136:01, 137:01, 140:01, 142:01, 147:01, 150:01, 159:01N, 162:01:01-162:01:02, 165:01, 167:01, 170:01, 171:01, 173:01, 184:01, 201:01, 202:01, 204:01, 206:01, 207:01, 209:01, 220:01, 223:01, 226:01, 244:01, 246:01, 247:01, 250:01, 264:01, 265:01, 267:01, 268:01, 269:01, 277:01, 284:01, 285:01, 291:01, 295:01, 300:01, 301:01, 304:01, 305:01, 312:01, 313:01, 314:01, 315:01, 316:01, 317:01, 324:01, 325:01, 326:01, 327:01, 328:01N, 331:01, 337:01, 340:01, 346:01, 348:01:01-348:01:02, 349:01, 353:01, 358:01, 362:01, 370:01, 371:01, 388:01, 389:01, 390:01, 393:01, 395:01, 398:01, 400:01, 403:01N, 408:01, 410:01, 411:01, 412:01, 417:01, 422:01, 436:01, 437:01, 438:01, 448:01, 449:01, 450:01N, 458:01, 462:01, 466:01, 470:01, 473:01, 481:01, 483:01, 490:01, 495:01, 503:01, 514:01, 515:01, 516:01, 517:01, 518:01, 519:01, 527:01, 532:01, 533:01, 535:01, 538:01, 542:01, 543:01, 544:01, 550:01, 552:01, 558:01, 560:01, 562:01, 563:01, 564:01, 565:01, 573:01, 587:01, 588:01, 597:01, 598:01N, 599:01, 600:01, 608:01, 609:01, 611:01, 612:01, 616:01, 619:01, 623:01, 631:01, 632:01, 633:01, 634:01, 635:01, 636:01, 638:01, 649:01, 650:01, 652:01, 653:01, 654:01, 657:01N, 661:01N, 667:01, 668:01:01:01-668:01:01:02, 672:01, 673:01, 697:01Q, 703:01, 707:01, 708:01, 709:01, 710:01, 711:01, 713:01, 715:01, 716:01, 717:01, 718:01, 720:01  \*222:01 |
| **32** | 75 bp  200 bp  260 bp | \*78:01  \*11:01:01:01-11:01:01:02, 11:01:02-11:01:04, 130:01, 147:01, 202:01, 203:01:01-203:01:02, 204:01, 205:01, 250:01, 264:01, 268:01, 328:01N, 343:01, 353:01, 370:01, 388:01, 389:01, 405:01, 450:01N, 517:01, 623:01, 649:01, 654:01, 672:01, 707:01  \*223:01, 293:01 |
| **33** | 105 bp  140 bp  195 bp | \*76:01, 92:01, 156:01, 203:01:01-203:01:02, 205:01 214:01, 215:01, 287:01, 288:01, 355:01, 363:01, 385:01, 442:01, 536:01, 555:01, 566:01  \*13:01:01:01-13:01:02, 33:01:01:01-33:01:01:05, 81:01:01:01-81:01:01:02, 107:01, 110:01, 117:01, 133:01, 156:01, 160:01, 172:01, 173:01, 198:01, 206:01, 229:01, 246:01, 247:01, 269:01, 277:01, 287:01, 288:01, 302:01, 304:01, 305:01, 362:01, 389:01, 393:01, 470:01, 438:01, 449:01, 474:01, 503:01, 514:01, 518:01, 519:01, 544:01, 555:01, 561:01, 564:01, 565:01, 566:01, 597:01, 600:01, 609:01, 612:01, 626.01, 631:01, 633:01, 663:01, 703:01, 711:01, 716:01, 720:01  \*123:01, 178:01, 218:01N |
| **37** | 160 bp  185 bp | \*13:01:01:01-13:01:02, 107:01, 110:01, 133:01, 160:01, 173:01, 246:01, 269:01, 278:01, 304:01, 362:01, 389:01, 393:01, 412:01, 449:01, 503:01, 518:01, 519:01, 538:01, 544:01, 564:01, 565:01, 597:01, 600:01, 612:01, 703:01, 720:01  \*15:01:01-15:01:02, 28:01, 40:01:01:01-40:01:01:02, 53:01, 74:01, 139:01, 198:01, 290:01, 296:01, 299:01, 345:01, 387:01, 471:01, 482:01, 493:01, 499:01, 512:01, 585:01, 644:01, 683:01, 695:01 |
| **38** | 95 bp  170 bp  200 bp | \*23:01:01-23:01:02, 34:01:01:01-34:01:02, 52:01, 55:01:01:01-55:01:01:02, 58:01, 62:01, 63:01, 67:01, 71:01:01-71:01:02, 87:01, 95:01, 103:01, 112:01, 121:01, 138:01, 201:01, 209:01, 244:01, 295:01, 314:01, 322:01, 325:01, 333:01, 340:01, 371:01, 392:01, 435:01, 451:01, 458:01, 563:01, 576:01, 580:01, 599:01, 635:01  \*186:01, 243:01, 657:01N  \*57:01?, 185:01, 611:01, 674:01 |
| **40** | 135 bp  180 bp  230 bp | \*275:01  \*30:01:01:01-30:01:01:02, 54:01, 408:01, 715:01  \*14:01:01:01-14:01:05, 35:01:01, 45:01, 66:01, 67:01, 76:01, 91:01:01:01-91:01:01:02, 98:01, 119:01, 125:01, 129:01, 197:01, 242:01, 243:01, 244:01, 312:01, 383:01, 385:01, 409:01, 445:01, 446:01, 490:01, 491:01, 492:01, 498:01, 503:01, 530:01, 540:01, 572:01, 629:01, 651:01, 671:01, 705:01, 715:01 |
| **41** | 75 bp  225 bp  250 bp  280 bp | \*77:01, 245:01, 559:01  \*154:01N  \*31:01, 34:01:01:01-34:01:02, 94:01, 176:01, 484:01, 493:01, 575:01, 580:01  \*134:01, 177:01 |
| **42** | 140 bp  185 bp  210 bp  245 bp  285 bp | \*97:01  \*32:01  \*176:01, 180:01  \*128:01  \*82:01, 301:01, 339:01, 400:01 |
| **44** | 60 bp  115 bp  155 bp  185 bp  210 bp  240 bp  270 bp | \*282:01, 619:01  \*99:01, 118:01, 220:01, 437:01, 453:01, 521:01  \*38:01, 619:01, 698:01  \*111:01, 118:01, 120:01N, 437:01  \*220:01  \*38:01, 241:01  \*64:01N |
| **45** | 120 bp  160 bp  190 bp  240 bp | \*46:01:01-46:01:02, 80:01, 86:01, 108:01, 164:01, 214:01, 235:01, 254:01, 332:01, 355:01, 508:01, 540:01, 555:01, 581:01, 601:01, 620:01  \*253:01  \*39:01:01:01-39:01:02, 49:01:01:01-49:01:01:03, 96:01, 117:01, 158:01, 172:01, 354:01:01-354:01:02, 440:01, 441:01, 474:01, 480:01, 531:01, 561:01, 584:01, 663:01  \*240:01 |
| **46** | 75 bp  210 bp | \*41:01:01:01-41:01:02, 60:01, 69:01:01:01-69:01:01:02, 83:01, 136:01, 204:01, 205:01, 229:01, 309:01, 581:01, 659:01  \*41:01:01:01-41:01:02, 60:01, 83:01, 96:01, 147:01, 179:01, 229:01, 299:01, 303:01, 309:01, 322:01, 581:01, 659:01 |
| **47** | 165 bp  215 bp | \*44:01, 114:01, 265:01, 394:01, 495:01, 599:01, 630:01  \*140:01 |
| **48** | 115 bp  210 bp  280 bp | \*56:01, 66:01, 76:01w, 92:01, 110:01, 125:01, 156:01, 207:01, 288:01, 294:01, 470:01, 566:01, 709:01  \*61:01N  \*85:01:01:01-85:01:02, 515:01, 713:01 |
| **49** | 95 bp  130 bp  205 bp | \*149:01  \*198:01, 290:01, 343:01, 354:01:01-354:01:02, 370:01, 375:01, 387:01, 389:01, 522:01, 623:01, 663:01  \*143:01, 251:01, 552:01 |
| **50** | 160 bp  210 bp | \*144:01, 146:01, 542:01, 637:01  \*01:01:01:01-01:01:02:02, 01:01:04-01:01:06, 18:01, 89:01, 90:01:01-90:01:02, 118:01, 122:01, 127:01, 158:01, 159:01N, 162:01:01-162:01:02, 198:01, 199:01, 200:01, 201:01, 220:01, 246:01, 247:01, 248:01, 249:01, 267:01, 290:01, 291:01, 292:01, 315:01, 316:01, 326:01, 327:01, 346:01, 347:01, 369:01, 387:01, 403:01N, 417:01, 436:01, 440:01, 462:01, 481:01, 483:01, 536:01, 542:01, 543:01, 561:01, 599:01, 608:01, 616:01, 631:01, 632:01, 661:01N, 667:01, 710:01, 711:01 |
| **51** | 170 bp  225 bp | \*145:01, 382:01N  \*452:01, 570:01N |
| **52** | 130 bp  160 bp  215 bp | \*151:01  \*511:01  \*165:01, 289:01, 452:01, 570:01N |
| **53** | 90 bp  145 bp  175 bp  200 bp | \*157:01, 321:01  \*221:01, 501:01, 573:01, 595:01  \*391:01, 467:01, 712:01N  \*153:01, 163:01, 242:01 |
| **54** | 115 bp  200 bp | \*161:01N, 505:01, 507:01N, 546:01  \*04:01:01:24N, 159:01N, 160:01, 328:01N, 454:01, 683:01 |
| **55** | 135 bp  165 bp  190 bp | \*155:01:01-155:01:02  \*382:01N, 511:01  \*218:01N |
| **56** | 145 bp  180 bp  230 bp | \*174:01, 658:01  \*84:01, 148:01  \*170:01, 239:01, 260:01, 487:01 |
| **61** | 145 bp  225 bp | \*168:01  \*459:01 |
| **63** | 210 bp  245 bp  275 bp | \*183:01, 319:01  \*216:01N  \*57:01?, 280:01, 356:01, 539:01 |
| **64** | 145 bp  180 bp  215 bp | \*217:01, 256:01, 658:01  \*232:01, 475:01  \*226:01 |
| **65** | 170 bp  205 bp  240 bp | \*181:01, 257:01, 258:01, 475:01  \*604:01  \*238:01 |
| **66** | 185 bp  235 bp  280 bp | \*276:01, 418:01, 432:01, 697:01Q  \*239:01, 260:01, 487:01  \*57:01?, 356:01, 455:01N, 539:01 |
| **67** | 90 bp  155 bp  180 bp  210 bp | \*504:01  \*501:01, 712:01N  \*261:01, 380:01, 657:01N  \*674:01 |
| **68** | 175 bp  200 bp  265 bp | \*228:01, 334:01, 522:01, 594:01  \*191:01, 192:01, 310:01, 342:01  \*109:01, 117:01, 158:01, 164:01, 199:01, 200:01, 271:01, 294:01, 369:01, 392:01, 440:01, 480:01, 508:01, 531:01, 561:01, 601:01, 663:01, 679:01 |
| **69** | 180 bp  215 bp  245 bp | \*227:01, 228:01, 646:01, 682:01  \*520:01  \*210:01, 211:01, 240:01, 272:01 |
| **70** | 75 bp  115 bp  155 bp  180 bp  215 bp  260 bp | \*476:01  \*551:01N  \*253:01, 286:01, 660:01  \*334:01, 522:01, 594:01  \*262:01, 263:01, 681:01  \*196:01, 596:01 |
| **71** | 140 bp  180 bp  260 bp | \*208:01, 250:01  \*315:01  \*268:01 |
| **72** | 145 bp  175 bp  250 bp | \*327:01  \*270:01  \*267:01, 293:01, 662:01 |
| **73** | 170 bp  190 bp | \*231:01  \*18:01, 28:01, 139:01, 178:01, 230:01, 279:01:01, 280:01, 292:01, 296:01, 347:01, 431:01, 489:01, 499:01, 512:01, 526:01, 644:01 |
| **74** | 115 bp  160 bp  215 bp | \*181:01, 406:01  \*255:01, 274:01, 374:01  \*252:01, 273:01, 582:01, 624:01 |
| **76** | 120 bp  180 bp  220 bp  250 bp | \*215:01  \*283:01, 359:01, 423:01:01-423:01:02, 523:01, 577:01  \*193:01, 681:01  \*225:01 |
| **77** | 120 bp  170 bp  220 bp  250 bp | \*215:01  \*488:01, 557:01  \*194:01, 360:01  \*311:01, 368:01, 687:01, 696:01N |
| **78** | 145 bp  180 bp  220 bp  250 bp | \*282:01  \*318:01, 485:01, 523:01, 641:01  \*195:01, 424:01, 510:01  \*224:01, 696:01N |
| **79** | 75 bp  115 bp  170 bp  245 bp  170 bp | \*476:01  \*551:01N  \*275:01, 283:01, 359:01, 396:01, 577:01  \*212:01, 224:01  \*679:01 |
| **80** | 160 bp  250 bp | \*213:01, 282:01, 286:01, 396:01, 433:01, 488:01, 557:01, 646:01, 660:01, 682:01  \*225:01 |
| **81** | 65 bp  95 bp  145 bp  180 bp  205 bp  285 bp | \*591:01  \*276:01  \*250:01  \*202:01, 230:01, 313:01  \*281:01, 472:01  \*268:01, 472:01 |
| **83** | 160 bp  215 bp | \*04:01:01:01-04:01:37, 11:01:01:01-11:01:04, 15:01:01-15:01:02, 24:01, 27:01, 28:01, 31:01, 33:01:01:01-33:01:01:05, 39:01:01:01-39:01:02, 40:01:01:01-40:01:01:02, 49:01:01:01-49:01:01:03, 51:01, 53:01, 66:01, 72:01:01:01-72:01:01:03, 74:01, 81:01:01:01-81:01:01:02, 85:01:01:01-85:01:02, 89:01, 96:01, 99:01, 102:01, 117:01, 120:01N, 121:01, 126:01:01:01-126:01:01:02, 139:01, 147:01, 149:01, 156:01, 158:01, 172:01, 174:01, 175:01, 176:01, 177:01, 178:01, 179:01, 180:01, 181:01, 192:01, 193:01, 194:01, 195:01, 198:01, 199:01, 202:01, 204:01, 205:01, 206:01, 207:01, 212:01, 213:01, 214:01, 215:01, 224:01, 225:01, 228:01, 229:01, 230:01, 232:01, 240:01, 247:01, 250:01, 253:01, 254:01, 255:01, 262:01, 264:01, 268:01, 272:01, 275:01, 276:01, 277:01, 279:01:01-279:01:02, 280:01, 281:01, 282:01, 283:01, 287:01, 290:01, 294:01, 296:01, 298:01, 299:01, 302:01, 303:01, 305:01, 319:01, 320:01, 323:01, 328:01N, 334:01, 335:01, 336:01, 337:01, 341:01, 345:01, 348:01:01-348:01:02, 350:01, 354:01:01-354:01:02, 355:01, 356:01, 357:01N, 360:01, 370:01, 372:01, 375:01, 376:01, 378:01, 387:01, 388:01, 396:01, 397:01, 398:01, 399:01, 415:01, 418:01, 425:01, 426:01, 427:01, 428:01, 434:01, 437:01, 450:01N, 453:01, 454:01, 455:01N, 456:01, 459:01, 464:01, 465:01, 468:01, 471:01, 474:01, 475:01, 476:01, 479:01, 480:01, 482:01, 485:01, 486:01, 487:01, 493:01, 512:01, 517:01, 520:01, 521:01, 522:01, 523:01, 524:01, 529:01, 531:01, 534:01, 553:01, 554:01, 555:01, 556:01, 559:01, 561:01, 566:01, 569:01, 574:01, 575:01, 578:01, 583:01, 584:01, 585:01, 591:01, 592:01, 593:01, 607:01, 614:01, 615:01, 618:01, 623:01, 625:01, 633:01, 642:01, 643:01, 644:01, 649:01, 654:01, 658:01, 663:01, 666:01, 670:01, 672:01, 677:01, 679:01, 682:01, 683:01, 686:01, 687:01, 694:01, 696:01N, 699:01, 702:01, 707:01, 713:01, 716:01  \*169:01 |
| **84** | 200 bp  260 bp | \*180:01, 418:01, 432:01, 604:01  \*177:01, 186:01, 338:01 |
| **85** | 110 bp  190 bp  260 bp  285 bp | \*572:01  \*175:01, 419:01, 429:01, 498:01  \*171:01  \*08:01?, 53:01?, 60:01?, 62:01?, 73:01?, 75:01?, 102:01?, 237:01, 585:01 |
| **86** | 125 bp  170 bp  195 bp  220 bp | \*190:01  \*485:01  \*354:01:01-354:01:02, 375:01, 480:01, 531:01, 663:01, 693:01N  \*360:01, 520:01 |
| **87** | 145 bp  230 bp | \*327:01, 619:01, 698:01  \*329:01, 587:01 |
| **90** | 80 bp  125 bp  215 bp | \*571:01  \*700:01N  \*415:01, 534:01 |
| **91** | 155 bp  220 bp | \*464:01, 535:01, 617:01, 699:01  \*534:01 |
| **92** | 115 bp  165 bp  195 bp  230 bp | \*403:01N  \*445:01  \*691:01N  \*533:01 |
| **93** | 185 bp  225 bp  255 bp | \*634:01  \*404:01, 598:01N, 661:01N  \*450:01N |
| **94** | 160 bp  190 bp  240 bp  270 bp | \*01:01:01:01-01:01:04, 01:01:06, 26:01:01-26:01:03, 56:01, 65:01:01-65:01:02, 90:01:01-90:01:02, 92:01, 118:01, 122:01, 125:01, 127:01, 142:01, 150:01, 159:01N, 162:01:01-162:01:02, 203:01:01-203:01:02, 220:01, 267:01, 288:01, 291:01, 306:01, 315:01, 326:01, 327:01, 346:01, 363:01, 377:01, 385:01, 403:01N, 411:01, 417:01, 436:01, 440:01, 442:01, 462:01, 470:01, 481:01, 483:01, 490:01, 499:01, 514:01, 516:01, 536:01, 542:01, 543:01, 562:01, 609:01, 616:01, 626:01, 631:01, 632:01, 636:01, 661:01N, 667:01, 708:01, 709:01, 710:01, 711:01  \*454:01, 486:01  \*08:01, 57:01, 65:01:01-65:01:02, 68:01, 73:01, 75:01, 84:01, 150:01, 188:01, 234:01, 285:01, 306:01, 377:01, 442:01, 499:01, 620:01, 626:01, 648:01:01:01-648:01:01:02  \*454:01, 486:01 |
| **95** | 140 bp  220 bp | \*13:01:01:01-13:01:02, 107:01, 117:01, 133:01, 160:01, 172:01, 173:01, 198:01w, 206:01, 246:01, 247:01, 269:01, 287:01, 362:01, 389:01w, 393:01, 438:01, 441:01, 449:01, 474:01, 503:01, 514:01, 518:01, 519:01, 544:01, 561:01, 564:01, 565:01, 597:01, 600:01, 609:01, 612:01, 631:01, 633:01, 634:01, 663:01w, 703:01, 711:01, 716:01  \*06:01:01:01-06:01:05, 13:01:01:01-13:01:02, 21:01, 29:01, 37:01, 44:01, 88:01, 93:01, 107:01, 109:01, 110:01, 117:01, 133:01, 160:01, 161:01N, 198:01, 200:01, 206:01, 208:01, 246:01, 247:01, 249:01, 269:01, 295:01, 347:01, 349:01, 362:01, 371:01, 389:01, 393:01, 413:01, 438:01, 448:01, 449:01, 518:01, 519:01, 544:01, 546:01, 550:01, 561:01, 563:01, 564:01, 565:01, 566:01, 567:01, 597:01, 600:01, 601:01, 608:01, 609:01, 612:01, 631:01, 633:01, 634:01, 662:01, 663:01, 703:01, 711:01, 717:01 |

**4**The following DPB1 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| DPB1\*32:01, 339:01 | 42 | DPB1\*250:01, 268:01 | 71, 81 |
| DPB1\*120:01N, 453:01, 521:01 | 44 | DPB1\*281:01, 591:01 | 81 |
| DPB1\*153:01, 321:01, 595:01 | 53 | DPB1\*498:01, 572:01 | 85 |
| DPB1\*237:01, 419:01 | 85 |  |  |

‘w’ might be weakly amplified.

‘?’ nucleotide sequence information not available for the primer matching sequence.

Changes to revision R01 compared to R00:

1. Primer mix 45 does not amplify the DPB1\*115:01 allele.

2. Primer mix 55 does not amplify the DPB1\*115:01 and 393:01 alleles.

3. Primer mix 72 does not amplify the DPB1\*393:01 allele.

The corrections above have been implemented in the Specificity and Interpretation tables.

Changes in revision R02 compared to R01:

1. Primer mix 3 may give rise to a lower yield of HLA-specific product compared to the other DPB1 primer mixes. A footnote reflecting the statement above was added to the Specificity table and the Worksheet of this lot.