

Olerup SSP[®] HLA-B*55

Product number:	101.570-06 – including <i>Taq</i> polymerase
Lot number:	06G
Expiry date:	2011-August-01
Number of tests:	6
Number of wells per test:	24
Storage - pre-aliquoted primers:	dark at -20°C
- PCR Master Mix:	-20°C
- Adhesive PCR seals	RT
- Product Insert	RT

This Product Description is only valid for Lot No. 06G.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-B*55 LOT

The HLA-B*55 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*[®] HLA-B*55 lot was made (Lot No. 55E).

The primers of the wells detailed below has been exchanged or modified.

Well	5'-primer	3'-primer	rationale
9	Exchanged, moved, added	Moved, added	Exchanged 5'primer to decrease primer dimer formation, one primer pair moved to well 23, primer pair added for the B*5525 allele.
17	Added	Added	Primer pair added for the B*5534 allele.
18	Modified	Exchanged, added	Modified 5'-primer for improved specificity, exchanged 3'-primer, primer added for the B*5531 allele.
22	Added	Added	Exchanged positive control primer pair, primer pair added to improve resolution of the B*5523 and B*5532 alleles, primer pair added for the B*5535 allele.
23	Added	Added	Exchanged positive control primer pair, primer pair from well 9.
24	-	Added	Primer added for the B*5533 allele.

PRODUCT DESCRIPTION

HLA-B*55 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*5501 to B*5535 alleles.

PLATE LAYOUT

Each test consists of 24 PCR reactions in a 24 well PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24

The 24 well PCR plate is marked with ‘HLA-B*55’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘06G’.

The PCR plates are covered with a PCR-compatible foil.

Please note: When removing each 24 well PCR plate, make sure that the remaining plates stay covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-B*55 SSP subtypings will be influenced by most B*07, most B*08, the B*13, the B*1405, several B*15, most B*18, the B*2714, the B*35, the B*37, the B*3819, nine B*39, several B*40, the B*41, the B*42, seven B*44, the B*45, the B*46, the B*4802, the B*49, the B*50, the B*51, the B*52, the B*53, the B*54, the B*56, the B*57, the B*58, the B*59, the B*6701, the B*7301, the B*78, the B*81, the B*82 and the B*8301 alleles when present on the other haplotype. In addition, the Cw*0620 allele will be amplified by primer mix 2, and the Cw*0808 allele will be amplified by primer mix 5.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*55 alleles, i.e. **B*5501 to B*5535**, recognized by the HLA Nomenclature Committee in July 2009¹ will give rise to unique amplification patterns by the primers in the HLA-B*55 subtyping kit.

The HLA-B*55 subtyping kit cannot separate the B*550101 to B*550104 alleles or the B*550201 to B*550203 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2009-July-17, release 2.26.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 34 HLA-B*55 alleles can be combined in 595 homozygous and heterozygous combinations. 264 of these genotypes do not give rise to unique amplification patterns. The different sizes of the specific PCR products in primer mixes 8, 9, 11, 17, 18, 20, 22, 23 and 24 were not considered in these calculations.

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Lot-specific information

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++++-----	+-----+-	-----	5503,5511 = 5503,5514
++++-----	--+-----	-----	5503,5515 = 5503,5524
++++-----	-----+-	+-----	5503,5517 = 5503,5528
++++-----	-----+-	-----+	5503,5532 = 5503,5533
++++-----	-----+-	-----	5501,5503 = 5503,5503
+++--+-	+-----+-	-----	5505,5511 = 5505,5514
+++--+-	--+-----	-----	5505,5515 = 5505,5524
+++--+-	-----+-	+-----	5505,5517 = 5505,5528
+++--+-	-----+-	-----+	5505,5532 = 5505,5533
+++--+-	-----+-	-----	5501,5505 = 5505,5505
+++-----+	--+-----	-----	5512,5515 = 5512,5524
+++-----+	--+-----	-----+	5513,5515 = 5513,5524
+++-----+	-----+-	-----+	5501,5513 = 5513,5533
+++-----	+-----+-	+-----	5515,5525 = 5524,5525
+++-----	+-----+-	-----	5511,5515 = 5511,5524 = 5514,5515
+++-----	+-----+-	++-----	5511,5518 = 5518,5525 = 5525,5534
+++-----	+-----+-	+-----	550201,5525 = 5511,5519 = 5519,5525
+++-----	+-----+-	++-----	5517,5525 = 5525,5528
+++-----	+-----+-	+-----	5511,5517 = 5511,5528
+++-----	+-----+-	+-----+	5525,5532 = 5525,5533
+++-----	+-----+-	+-----	5501,5525 = 5511,5525 = 5511,5531 =
			5514,5525 = 5514,5531 = 5525,5525 =
			5525,5531
+++-----	+-----+-	-----+	5511,5529 = 5514,5529
+++-----	+-----+-	-----+	5511,5532 = 5511,5533 = 5514,5533
+++-----	+-----+-	-----	5501,5511 = 5501,5514 = 5511,5511 =
			5511,5514
+++-----	--+-----	-----	5507,5515 = 5507,5524
+++-----	--+++-----	-----+	5510,5515 = 5510,5524
+++-----	--+-----	++-----	5515,5518 = 5518,5524
+++-----	--+-----	+-----	5515,5534 = 5524,5534
+++-----	--+-----	+-----	5515,5519 = 5519,5524 = 5522,5531
+++-----	--+-----	--+-----	5515,5530 = 5524,5530
+++-----	--+-----	--+-----	5515,5526 = 5524,5526
+++-----	--+-----	-----+	550201,5509 = 5509,5535 = 5515,5535 =
			5524,5535
+++-----	--+-----	-----+	5515,5516 = 5516,5524 = 5522,5529
+++-----	--+-----	-----	5501,5522 = 550201,5515 = 550201,5524
			= 5515,5522
+++-----	--+-----	+-----	5515,5520 = 5520,5524
+++-----	--+-----	+-----+	5509,5527 = 5515,5527 = 5524,5527
+++-----	--+-----	+-----	5509,5517 = 5509,5528
+++-----	--+-----	+-----	5515,5517 = 5515,5528 = 5517,5524 =
			5524,5528
+++-----	--+-----	+-----	5515,5531 = 5524,5531
+++-----	--+-----	-----+	5509,5521 = 5509,5529 = 5515,5521 =
			5521,5524
+++-----	--+-----	-----+	5509,5523 = 5509,5532 = 5509,5533 =
			5515,5523 = 5523,5524
+++-----	--+-----	-----+	5501,5509 = 5509,5515
+++-----	--+-----	-----+	5515,5529 = 5524,5529
+++-----	--+-----	-----+	5515,5532 = 5515,5533 = 5524,5532 =
			5524,5533

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+++----- --+----+ - - - - - 5501,5515 = 5501,5524 = 5515,5515 =
5515,5524
+++----- --+----- - - - - - + - 5509,5509 = 5509,5524
+++----- - - - - + - + - - - - 5501,5518 = 5518,5531 = 5531,5534
+++----- - - - - + - + - - - - + 5516,5531 = 5519,5529
+++----- - - - - + - + - - - - 5501,5519 = 550201,5531 = 5519,5531
+++----- - - - - + - + - - - - + 5501,5516 = 550201,5529 = 5516,5529
+++----- - - - - - + - + - - - - 5517,5531 = 5528,5531
+++----- - - - - - + - + - - - + + 5501,5527 = 5527,5533
+++----- - - - - - + - + - - - + - 5517,5529 = 5528,5529
+++----- - - - - - + - + - - - + + 5517,5533 = 5528,5533
+++----- - - - - - + - + - - - - 5501,5517 = 5501,5528
+++----- - - - - - + - + - - - + + 5531,5532 = 5531,5533
+++----- - - - - - + - + - - - - 5501,5531 = 5531,5531
+++----- - - - - - + - - - - - + + + 5521,5533 = 5523,5529
+++----- - - - - - + - - - - - + + - 5501,5521 = 5521,5529
+++----- - - - - - + - - - - - + + + 5501,5523 = 5523,5533
+++----- - - - - - + - - - - - + + + 5529,5532 = 5529,5533
+++----- - - - - - + - - - - - + - 5501,5529 = 5529,5529
+++----- - - - - - + - - - - - + + 5501,5532 = 5501,5533 = 5532,5533 =
5533,5533
++-----+ - - - - + - + - - - - - 5512,5517 = 5512,5528 = 5512,5534
++-----+ - - - - + - + - - - - + - 5512,5523 = 5513,5535
++-----+ - - - - + - + - - - - - + 550201,5513 = 5512,5513 = 5512,5532
++-----+ - - - - + - + - - - - - 550201,5512 = 5512,5512
++-----+ - - - - - + - + - - - - + 5513,5517 = 5513,5528
++-----+ - - - - - + - - - - - + + 5513,5513 = 5513,5532
++-----+ - + - + - + - + - - - - 5507,5517 = 5507,5528 = 5507,5534
++-----+ - + - + - + - - - - - - 550201,5507 = 5507,5507
++-----+ - + - + - + - + - - - - 5517,5522 = 5522,5528 = 5522,5534
++-----+ - - + + - + - + - - + - - 5510,5517 = 5510,5528 = 5510,5534
++-----+ - - + + - + - - - - + - - 550201,5510 = 5510,5510
++-----+ - - - - + - + - + - - - - 5518,5520 = 5518,5526 = 5519,5520
++-----+ - - - - + - + - + - - - + 5518,5523 = 5518,5527 = 5519,5527
++-----+ - - - - + - + - + - - - - 550201,5518 = 5517,5518 = 5517,5519 =
5518,5519 = 5518,5528 = 5519,5528 =
5519,5534
++-----+ - - - - + - + - + - - - - 5517,5530 = 5528,5530 = 5530,5534
++-----+ - - - - + - + - + - - - - 550201,5520 = 5517,5526 = 5520,5526 =
5520,5534 = 5526,5528 = 5526,5534
++-----+ - - - - + - + - + - - - + 550201,5527 = 5523,5534 = 5527,5534 =
5527,5535
++-----+ - - - - + - + - + - - - - 5517,5535 = 5528,5535 = 5534,5535
++-----+ - - - - + - + - + - - - + 5516,5517 = 5516,5528 = 5516,5534
++-----+ - - - - + - + - + - - - - 550201,5517 = 550201,5528 =
550201,5534 = 5517,5534 = 5528,5534
++-----+ - - - - + - + - + - - - - 550201,5519 = 5519,5519
++-----+ - - - - + - + - + - - - - 550201,5530 = 5530,5530
++-----+ - - - - + - + - + - - - - 550201,5526 = 5526,5526
++-----+ - - - - + - + - + - - - + 550201,5521 = 5516,5521 = 5516,5535 =
5521,5535
++-----+ - - - - + - + - + - - - + 550201,5523 = 5523,5535 = 5532,5535
++-----+ - - - - + - + - + - - - - 550201,5535 = 5535,5535



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++-----	----+--	-----+-	550201,5516 = 5516,5516
++-----	-----+-	+--+--+	5520,5523 = 5520,5527
++-----	-----+-	+----++	5517,5521 = 5521,5528
++-----	-----+-	+----++	5517,5523 = 5517,5527 = 5523,5527 =
			5523,5528 = 5527,5527 = 5527,5528 =
			5527,5532
++-----	-----+-	+-----+	5517,5532 = 5528,5532
++-----	-----+-	+-----	5517,5528 = 5528,5528
++-----	-----+-	-----++	5521,5523 = 5521,5532
++-----	-----+-	-----++	5523,5523 = 5523,5532
+-----	-----+-	+--+-----	5517,5520 = 5520,5520
-+-----	----+--	+-----	5518,5518 = 5518,5534

5501=550101-5504, 5502=550201-550203

SPECIFICITY TABLE

HLA-B*55 SSP subtyping

Specificities and sizes of the PCR products of the 24 primer mixes used for HLA-B*55 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*55 alleles	Other amplified HLA Class I alleles ³
1⁵	400 bp	800 bp	*550101-5505, 5507-5517, 5519-5533, 5535	*0765, 3576, 5401-5406, 5408N-5419, 5601-5607, 5608 ^w , 5609-5613, 5615, 5616, 5618-5622, 5624, 8101, 8103 [?] , 8104N [?] , 8201, 8202, 8301
2⁴	125 bp	1070 bp	*550101-5503, 5505, 5507, 5509-5513, 5515, 5516, 5518, 5519, 5521-5535	*130101-1304, 1306-1309, 1311-1320, 132201-1323, 1325, 1326, 1516, 1520, 1534, 1542, 1562, 1567, 1585, 1586, 1595, 9537, 1822, 2714, 350101-350803, 3510, 3511, 3513-3515, 3519-3521, 3523-3530, 3533-3538, 3540N-3542, 3545-3550, 3552, 3554-3558, 3560, 3562, 3563, 3565Q, 3566, 356801-3572, 3574-3578, 3580-3585, 3589-3595, 3597, 4028, 4410, 4415, 4418, 4448, 4501-4509, 4611, 4618, 4802, 490101-4905, 5001, 5002, 5115, 5156, 530101-5306, 5308-5318, 5401-5405N, 5407, 5408N, 5410, 5412-5414, 5416-5419, 5601, 5602, 5607-5611, 5613-5617, 5619N, 5622-5624, 5705, 580101-5802, 5804-5807, 5809, 5811-5813, 5815-5819, 5821, 5901, 5903-5905, 8201, 8202, Cw*0620
3	150 bp	1070 bp	*550101-550104, 5503, 5505,	*1316, 1320, 1542, 5162

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			5509 ^w , 5511, 5515, 5524, 5525, 5529, 5531, 5533	
4	235 bp	1070 bp	*5503	*0815, 3574, 4073, 460101-4604, 4606-4619, 4621
5	235 bp	800 bp	*5504	*0719, 0731, 0734, 0743, 080101-0808N, 0810, 0813-0815, 0817-0820, 0822-0824, 0826-0838, 1405, 1814, 1822 ^w , 3587, 3709, 3819, 3903, 3914, 3924, 3929, 3937, 4039, 410201, 4104, 4201, 4202, 420501-4212, Cw*0808
6^{4,6}	100 bp	1070 bp	*5505	
7	180 bp	1070 bp	*5508	*0720, 0724, 0760, 0821, 0825, 1509, 1510, 1530, 1537, 1545, 1548, 1563, 1590, 1599, 9550, 350201-350203, 350401-350403, 350901, 350902, 3512, 3518, 3522, 3534, 3539, 3544, 3581, 3583, 3595, 4005, 4026, 4028, 4063, 4092, 4462, 510101-510902, 5111N, 5112, 5118-5120, 5122-512402, 5126-5130, 5132, 5133, 5135, 5138-5141N, 5143, 5144N, 5146, 5148-5161, 5164, 5165, 520101-5207, 5209-5213, 560501-5606, 5615, 5621, 5702-570302, 5705, 5707, 5709, 5712, 5717, 5808, 7801-7806
8^{4,5,7}	105 bp, 425 bp	800 bp	*5512, 5513	*9537, 390601, 390602, 3933, 3934, 3950, 4086, 4502, 511301, 511302, 5214, 5622, 5903, 7301
9⁸	215 bp, 375 bp	1070 bp	*5511, 5514, 5525	
10	140 bp	1070 bp	*5507	*5401, 5403, 5404, 5406-5419
11^{4,9}	125 bp, 180 bp	1070 bp	*5509, 5515, 5522, 5524	*130101-130205, 1307N-1309, 1311, 1314-1320, 132201-1323, 1325, 4048

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12	210 bp	1070 bp	*5510	*070201-070207, 070209, 0704-0707, 0709, 0711, 0712, 0714, 0715, 0717-0726, 0728, 0730, 0731, 0733-0736, 0739-0749N, 0751-0764, 0766-0768, 0775-0777, 4201, 4204-4206, 4208, 4210, 4212, 670101, 670102, 8101-8104N
13	150 bp	1070 bp	*550201-550203, 5507, 5510, 5512, 5516, 5518, 5519, 5522, 5526, 5530, 5534, 5535	*130101-1303, 1306-1309, 1311, 1312, 1314, 1315, 1317, 1318 ^w , 1319, 132201-1323, 1325, 1586, 3560, 4048, 4071, 4410, 4611, 4618, 5115, 5401-5403, 5405N, 5407, 5408N, 5410 ^w , 5412, 5413, 5417-5419, 5601, 5602, 5604, 5607, 5608, 5610, 5614, 5616, 5617, 5619N, 5620, 5623, 5624, 5901, 5904, 5905
14	215 bp	800 bp		*150104, 370104, 4094, 5401-5419
15	245 bp	1070 bp	*550101-5503, 5505, 5507, 5510-5513, 5515-5521, 5523, 5525-5535	*0809, 1542, 1583, 3560, 390601, 390602, 3934, 4101, 4105-4107, 4204, 4508, 4618, 5121, 5136, 5401, 5402, 5404, 5405N, 5407, 5408N, 5410-5419, 5623, 5901-5903, 5905
16	245 bp	1070 bp		*1303, 1304, 1504, 1516, 1567, 1595, 9537, 9555, 3537, 3933, 4415, 4418, 4420, 4447, 4501-4507, 4509, 4611, 490101-4905, 5001, 5002, 5004, 510101-5103, 5105, 5107-510902, 5111N-5115, 5117-5120, 5122-512402, 5126-5130, 5132, 5133, 5135, 5137-5141N, 5143, 5144N, 5148-5155, 5157, 5158, 5160, 5161, 5163, 5165, 520101-5207, 5209-5214, 5403, 5601, 560501-5608, 5613-5617, 5620-5622, 5624, 5808, 5904, 7801-7806

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17 ^{4,10}	105 bp, 380 bp	1070 bp	*5517, 5518, 5520, 5527, 5528, 5534	*0809, 1583, 2714, 40060101-400602, 4044, 4053, 4070, 4075, 4083, 4093, 4095, 4096, 4101, 4105-4107, 4204, 4420, 4447, 510101-5103, 5105, 5107-5112, 5114, 5116- 512402, 5126-5134, 5136, 5138-5141N, 5143, 5144N, 5148-5155, 5157, 5158, 5160, 5161, 5165, 520101- 5213, 5404, 5411, 5415, 560501-5606, 5615, 5621, 5808, 5902, 7801-7806
18 ^{6,11}	215 bp, 310 bp, 415 bp	800 bp	*5518, 5519, 5525, 5531	*5623, 5901-5905
19 ⁶	205 bp	800 bp	*5530	
20 ^{4,5,12}	95 bp, 220 bp	1070 bp	*5520, 5526	*0809, 1583, 4101, 4105- 4107, 4204, 4415, 4418, 4420, 4501-4509, 5108, 5120, 5136, 5144N, 5613
21	270 bp	800 bp	*5510	*180101-1803, 1805-1815, 1818-1828, 1830-1833, 1835, 3525, 370101-3714, 5616, 5812, 8101, 8103 [?] , 8104N [?] , 8201, 8202, 8301
22 ^{4,13}	95 bp, 225 bp, 285 bp	800 bp	*5509, 5521, 5523, 5527, 5535	*1304, 1318, 1504, 1516, 1567, 1595, 9537, 3933, 4044, 4420, 4447, 4509, 4904, 4905, 5105, 5129, 5154, 5161, 5410, 5414, 5415, 5603, 5606
23 ¹⁴	165 bp, 220 bp	1070 bp	*5516, 5521, 5529	*1504, 9537, 4202, 4209, 4506, 5161, 5402
24 ^{4,15}	100 bp, 235 bp	1070 bp	*5513, 5523, 5527, 5532, 5533	*1304, 1504, 1516, 1567, 1595, 9537, 9555, 3537, 390601, 390602, 3933, 3934, 3950, 4044, 4086, 4420, 4447, 4502, 4509, 4904, 4905, 511301, 511302, 5137, 5163, 5212, 5214, 5414, 5415, 5622, 5903, 7301

¹ Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B*55 SSP typings. When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective lengths of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

² The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the HLA-B*55 subtyping.

In addition, wells number 5, 8, 14, 18, 19, 21 and 22 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

³ Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*55 alleles will be amplified by primer mixes 1 to 5, 7, 8, 10 to 18 and 20 to 24. In addition, the Cw*0620 allele will be amplified by primer mix 2, and the Cw*0808 allele will be amplified by primer mix 5.

⁴ Specific PCR fragments shorter than 125 base pairs have a lower intensity than longer PCR bands.

⁵ Primer mixes 1 and 8 might have a tendency of giving rise to primer oligomer formation.

⁶ Primer mix 6, 18 and 19 have a tendency of giving rise to non-specific amplifications.

⁷ Primer mix 8: Specific PCR fragment of 105 bp in the B*5513 and B*9537, 390601-390602, 3933, 3934, 3950, 4086, 4502, 511301-511302, 5214, 5622, 5903 and 7301 alleles. Specific PCR fragment of 425 bp in the B*5512 allele.

⁸ Primer mix 9: Specific PCR fragment of 215 bp in the B*5525 allele. Specific PCR fragment of 375 bp in the B*5511 and 5514 alleles.

⁹ Primer mix 11: Specific PCR fragment of 125 bp in the B*5515 allele. Specific PCR fragment of 180 bp in the B*5509, 5522, 5524 and B*1301-130205, 1307N-1309, 1311, 1314-1320, 132201-1323, 1325 and 4048 alleles.

¹⁰ Primer mix 17: Specific PCR fragment of 105 bp in the B*5517, 5520, 5527, 5528 and B*0809, 1583, 2714, 40060101-400602, 4044, 4053, 4070, 4075, 4083, 4093, 4095, 4096, 4101, 4105-4107, 4204, 4420, 4447, 510101-5103, 5105, 5107-5112, 5114, 5116-512402, 5126-5134, 5136, 5138-5141N, 5143, 5144N, 5148-5155, 5157, 5158, 5160, 5161, 5165, 520101-5213, 5404, 5411, 5415, 560501-5606, 5615, 5621, 5808, 5902 and 7801-7806 alleles. Specific PCR fragment of 380 bp in the B*5518 and 5534 alleles.

¹¹ Primer mix 18: Specific PCR fragment of 215 bp in the B*5525 allele. Specific PCR fragment of 310 bp in the B*5519 allele. Specific PCR fragment of 415 bp in the B*5518, 5531 and B*5623 and 5901-5905 alleles.

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¹²Primer mix 20: Specific PCR fragment of 95 bp in the B*5526 allele. Specific PCR fragment of 220 bp in the B* 5520 and B*0809, 1583, 4101, 4105-4107, 4204, 4415, 4418, 4420, 4501-4509, 5108, 5120, 5136, 5144N and 5613 alleles.

¹³Primer mix 22: Specific PCR fragment of 95 bp in the B*5523, 5527 and B*1304, 1504, 1516, 1567, 1595, 4044, 4420, 4447, 4509, 4904, 4905, 5414, 5415 alleles. Specific PCR fragment of 225 bp in the B*5509, 5521 and B*1318, 1504, 9537, 3933, 5105, 5129, 5154, 5161 and 5410 alleles. Specific PCR fragment of 285 bp in the B*5535 and B*5603 and 5606 alleles.

¹⁴Primer mix 23: Specific PCR fragment of 165 bp in the B*5529 allele. Specific PCR fragment of 220 bp in the B*5516, 5521 and B*1504, 9537, 4202, 4209, 4506, 5161 and 5402 alleles.

¹⁵Primer mix 24: Specific PCR fragment of 100 bp in the B*5513, 5523, 5527, 5532, 1304, 1504, 1516, 1567, 1595, 9537, 9555, 3537, 390601, 390602, 3933, 3934, 3950, 4044, 4086, 4420, 4447, 4502, 4509, 4904, 4905, 511301, 511302, 5137, 5163, 5212, 5214, 5414, 5415, 5622, 5903 and 7301 allele. Specific PCR fragment of 235 bp in the B*5533 allele.

?, nucleotide sequence of the primer matching region is not known.

‘w’, may be weakly amplified.

INTERPRETATION TABLE												
HLA-B*55 SSP subtyping												
Amplification patterns of the B*5501 to B*5535 alleles												
	Well⁵											
	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Length of int.	800	1070	1070	1070	800	1070	1070	800	1070	1070	1070	1070
pos. control¹												
5'-primer(s)²	41	379	420	106	363	245	419	48	48	106	186	103
	5'-CTg ^{3'}	5'-ACC ^{3'}	5'-TTA ^{3'}	5'-CCA ^{3'}	5'-AgC ^{3'}	5'-ggC ^{3'}	5'-gTA ^{3'}	5'-gCC ^{3'}	5'-gCC ^{3'}	5'-CCA ^{3'}	5'-AgA ^{3'}	5'-CCT ^{3'}
								357	272		420	
								5'-Tgg ^{3'}	5'-CTA ^{3'}		5'-TTA ^{3'}	
3'-primer(s)³	272	463	527	299	559	302	559	302	94	206	272	272
	5'-TgT ^{3'}	5'-gCT ^{3'}	5'-CCT ^{3'}	5'-TCA ^{3'}	5'-CgT ^{3'}	5'-ggC ^{3'}	5'-CAG ^{3'}	5'-ggT ^{3'}	5'-gAC ^{3'}	5'-CCC ^{3'}	5'-TgT ^{3'}	5'-TgT ^{3'}
								419	362		559	
								5'-CgA ^{3'}	5'-TCA ^{3'}		5'-CTC ^{3'}	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
HLA-B allele⁴												
*550101-550104	1	2	3									
*550201-550203	1	2										
*5503	1	2	3	4								
*5504	1				5							
*5505	1	2	3			6						
*5507	1	2								10		
*5508	1						7					
*5509	1	2	w								11	
*5510	1	2										12
*5511	1	2	3						9			
*5512	1	2						8				
*5513	1	2						8				
*5514	1								9			
*5515	1	2	3								11	
*5516	1	2										
*5517	1											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

INTERPRETATION TABLE

HLA-B*55 SSP subtyping

Amplification patterns of the B*5501 to B*5535 alleles

Well ⁵												
13	14	15	16	17	18	19	20	21	22	23	24	
150	215	245	245	105	215	205	95	270	95	165	100	Length of spec.
				380	310		220		225	220	235	PCR products
					415				285			
1070	800	1070	1070	1070	800	800	1070	800	800	1070	1070	Length of int.
												pos. control ¹
420	1st I	357	357	48	48	134	106	41	48	97	357	5'-primer(s) ²
5'-TTA 3'	5'-CAg 3'	5'-Tgg 3'	5'-Tgg 3'	5'-gCC 3'	5'-gCC 3'	5'-CCA 3'	5'-CCA 3'	5'-CTg 3'	5'-gCC 3'	5'-TCC 3'	5'-Tgg 3'	
				357			357		357	357		
				5'-Tgg 3'			5'-Tgg 3'		5'-Tgg 3'	5'-Tgg 3'		
527	175	559	559	259	94	299	160	142	165	272	412	3'-primer(s) ³
5'-CCA 3'	5'-CCg 3'	5'-CgT 3'	5'-CAg 3'	5'-CTC 3'	5'-gAC 3'	5'-TCT 3'	5'-gTT 3'	5'-TgA 3'	5'-Tgg 3'	5'-TgT 3'	5'-gTC 3'	
				259	187		538		412	479	419	
				5'-CTC 3'	5'-gTT 3'		5'-gTC 3'		5'-gTC 3'	5'-CCA 3'	5'-Cgg 3'	
				419	292				539	538	419	
				5'-CgT 3'	5'-gTA 3'				5'-TCC 3'	5'-CCA 3'	5'-CgA 3'	
					292						550	
					5'-gTA 3'						5'-CAT 3'	
					292							
					5'-gTA 3'							
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
												HLA-B allele ⁴
		15										*550101-550104
13		15										*550201-550203
		15										*5503
												*5504
		15										*5505
13		15										*5507
												*5508
									22			*5509
13		15						21				*5510
		15										*5511
13		15										*5512
		15									24	*5513
												*5514
		15										*5515
13		15								23		*5516
		15		17								*5517
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*5518		2										
*5519	1	2										
*5520	1											
*5521	1	2										
*5522	1	2									11	
*5523	1	2										
*5524	1	2	3								11	
*5525	1	2	3						9			
*5526	1	2										
*5527	1	2										
*5528	1	2										
*5529	1	2	3									
*5530	1	2										
*5531	1	2	3									
*5532	1	2										
*5533	1	2	3									
*5534		2										
*5535	1	2										
*070201-070207, 070209, 0704-0707, 0709, 0711, 0712, 0714, 0715, 0717- 071802, 0721-0723, 0725, 0726, 0728, 0730, 0733, 0735, 0736, 0739-0742, 0744-0749N, 0751-0759, 0761-0764, 0766-0768, 0775-0777, 670101, 670102, 8102												12
*0719, 0731, 0734, 0743, 4201, 420501-4206, 4208, 4210, 4212					5							12
*0720, 0724, 0760							7					12
*0765, 5612, 5618	1											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
13		15		17	18							*5518
13		15			18							*5519
		15		17			20					*5520
		15							22	23		*5521
13												*5522
		15							22		24	*5523
												*5524
		15			18							*5525
13		15					20					*5526
		15		17					22		24	*5527
		15		17								*5528
		15								23		*5529
13		15				19						*5530
		15			18							*5531
		15									24	*5532
		15									24	*5533
13		15		17								*5534
13		15							22			*5535
												*070201-070207, 070209, 0704-0707, 0709, 0711, 0712, 0714, 0715, 0717- 071802, 0721-0723, 0725, 0726, 0728, 0730, 0733, 0735, 0736, 0739-0742, 0744-0749N, 0751-0759, 0761-0764, 0766-0768, 0775-0777, 670101, 670102, 8102
												*0719, 0731, 0734, 0743, 4201, 420501-4206, 4208, 4210, 4212
												*0720, 0724, 0760
												*0765, 5612, 5618
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*080101-0808N, 0810, 0813, 0814, 0817-0820, 0822-0824, 0826-0838, 1405, 3587, 3819, 3903, 3914, 3924, 3929, 3937, 4039, 410201, 4104, 4207, 4211, Cw*0808					5							
*0809, 1583, 4101, 4105-4107, 5136												
*0815				4	5							
*0821, 0825, 1509, 1510, 1530, 1537, 1545, 1548, 1563, 1590, 1599, 9550, 350901, 350902, 3512, 3518, 3522, 3539, 3544, 4005, 4026, 4063, 4092, 4462, 5104, 5106, 5146, 5159, 5164, 5702-570302, 5707, 5709, 5712, 5717							7					
*130101-130205, 1307N-1309, 1311, 1314, 1315, 1317, 1319, 132201-1323, 1325		2									11	
*1303, 5115, 5614, 5617		2										
*1304, 1516, 1567, 1595, 4904, 4905		2										
*1306, 1312, 1586, 4410		2										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
												*080101-0808N, 0810, 0813, 0814, 0817-0820, 0822- 0824, 0826-0838, 1405, 3587, 3819, 3903, 3914, 3924, 3929, 3937, 4039, 410201, 4104, 4207, 4211, <i>Cw*0808</i>
		15		17			20					*0809, 1583, 4101, 4105- 4107, 5136 <i>*0815</i>
												*0821, 0825, 1509, 1510, 1530, 1537, 1545, 1548, 1563, 1590, 1599, 9550, 350901, 350902, 3512, 3518, 3522, 3539, 3544, 4005, 4026, 4063, 4092, 4462, 5104, 5106, 5146, 5159, 5164, 5702-570302, 5707, 5709, 5712, 5717
13												*130101-130205, 1307N- 1309, 1311, 1314, 1315, 1317, 1319, 132201-1323, 1325
13			16									*1303, 5115, 5614, 5617
			16						22		24	*1304, 1516, 1567, 1595, 4904, 4905
13												*1306, 1312, 1586, 4410
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*1313, 1326, 1520, 1534, 1562, 1585, 350101-350107, 350301, 350302, 3505-350803, 3510, 3511, 3513-3515, 3519-3521, 3523, 3524, 3526-3530, 3533, 3535, 3536, 3538, 3540N-3542, 3545-3550, 3552, 3554-3558, 3562, 3563, 3565Q, 3566, 356801-3572, 3575, 3577, 3578, 3580, 3582, 3584, 3585, 3589-3594, 3597, 4448, 4802, 530101-5306, 5308-5318, 580101-5802, 5804-5807, 5809, 5811, 5813, 5815-5819, 5821, <i>Cw*0620</i>		2										
*1316, 1320		2	3								11	
*1318		2									11	
*150104, 4094												
*1504												
*1542		2	3									
*9537		2						8				
*180101-1803, 1805-1813, 1815, 1818-1821, 1823N-1828, 1830-1833, 1835, 370101-370103, 370105-3708, 3710-3714												
*1814, 3709					5							
*1822		2			w							
*2714		2										
*350201-350203, 350401-350403, 3534, 3581, 3583, 3595, 4028, 5156, 5705		2					7					
*3525, 5812		2										
*3537		2										
*3560		2										
*3574		2		4								
*3576, 5609, 5611	1	2										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
												*1313, 1326, 1520, 1534, 1562, 1585, 350101- 350107, 350301, 350302, 3505-350803, 3510, 3511, 3513-3515, 3519-3521, 3523, 3524, 3526-3530, 3533, 3535, 3536, 3538, 3540N-3542, 3545-3550, 3552, 3554-3558, 3562, 3563, 3565Q, 3566, 356801- 3572, 3575, 3577, 3578, 3580, 3582, 3584, 3585, 3589-3594, 3597, 4448, 4802, 530101-5306, 5308- 5318, 580101-5802, 5804- 5807, 5809, 5811, 5813, 5815-5819, 5821, <i>Cw*0620</i>
												*1316, 1320
w									22			*1318
	14											*150104, 4094
			16						22	23	24	*1504
		15										*1542
			16						22	23	24	*9537
								21				*180101-1803, 1805-1813, 1815, 1818-1821, 1823N- 1828, 1830-1833, 1835, 370101-370103, 370105- 3708, 3710-3714
								21				*1814, 3709
								21				*1822
				17								*2714
												*350201-350203, 350401- 350403, 3534, 3581, 3583, 3595, 4028, 5156, 5705
								21				*3525, 5812
			16								24	*3537
13		15										*3560
												*3574
												*3576, 5609, 5611
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*370104												
*390601, 390602, 3934								8				
*3933								8				
*3950, 4086, 7301								8				
*40060101-400602, 4053, 4070, 4075, 4083, 4093, 4095, 4096, 5110, 5116, 5131, 5134, 5208												
*4044												
*4048											11	
*4071												
*4073, 460101-4604, 4606- 4610, 4612-4617, 4619, 4621				4								
*4202, 4209					5							
*4204												12
*4415, 4418, 4501, 4503- 4505, 4507		2										
*4420												
*4447												
*4502		2						8				
*4506		2										
*4508		2										
*4509		2										
*4611		2		4								
*4618		2		4								
*490101-4903, 5001, 5002		2										
*5004												
*510101-5103, 5107, 510901, 510902, 5111N, 5112, 5118, 5119, 5122- 512402, 5126-5128, 5130, 5132, 5133, 5138-5141N, 5143, 5148-5153, 5155, 5157, 5158, 5160, 5165, 520101-5207, 5209-5211, 5213, 5808, 7801-7806							7					
*5105, 5129, 5154								7				
*5108, 5120, 5144N								7				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
	14							21				*370104
		15									24	*390601, 390602, 3934
			16						22		24	*3933
											24	*3950, 4086, 7301
				17								*40060101-400602, 4053, 4070, 4075, 4083, 4093, 4095, 4096, 5110, 5116, 5131, 5134, 5208
				17					22		24	*4044
13												*4048
13												*4071
												*4073, 460101-4604, 4606- 4610, 4612-4617, 4619, 4621
										23		*4202, 4209
		15		17			20					*4204
			16				20					*4415, 4418, 4501, 4503- 4505, 4507
			16	17			20		22		24	*4420
			16	17					22		24	*4447
			16				20				24	*4502
			16				20			23		*4506
		15					20					*4508
			16				20		22		24	*4509
13			16									*4611
13		15										*4618
			16									*490101-4903, 5001, 5002
			16									*5004
			16	17								*510101-5103, 5107, 510901, 510902, 5111N, 5112, 5118, 5119, 5122- 512402, 5126-5128, 5130, 5132, 5133, 5138-5141N, 5143, 5148-5153, 5155, 5157, 5158, 5160, 5165, 520101-5207, 5209-5211, 5213, 5808, 7801-7806
			16	17					22			*5105, 5129, 5154
			16	17			20					*5108, 5120, 5144N
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*511301, 511302, 5214								8				
*5114, 5117												
*5121												
*5135							7					
*5137, 5163, 9555												
*5161							7					
*5162			3									
*5212							7					
*5401, 5408N, 5412, 5413, 5417-5419	1	2								10		
*5402	1	2										
*5403	1	2								10		
*5404	1	2								10		
*5405N	1	2										
*5406, 5409	1									10		
*5407		2								10		
*5410	1	2								10		
*5411	1									10		
*5414	1	2								10		
*5415	1									10		
*5416	1	2								10		
*5601, 5607, 5624	1	2										
*5602, 5610, 5619N	1	2										
*5603	1											
*5604	1											
*560501, 560502, 5621	1						7					
*5606	1						7					
*5608	w	2										
*5613	1	2										
*5615	1	2					7					
*5616	1	2										
*5620	1											
*5622	1	2						8				
*5623, 5901, 5905		2										
*5902												
*5903		2						8				
*5904		2										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **06G**

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150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
			16								24	*511301, 511302, 5214
			16	17								*5114, 5117
		15		17								*5121
			16									*5135
			16								24	*5137, 5163, 9555
			16	17					22	23		*5161
												*5162
			16	17							24	*5212
13	14	15										*5401, 5408N, 5412, 5413, 5417-5419
13	14	15								23		*5402
13	14		16									*5403
	14	15		17								*5404
13	14	15										*5405N
	14											*5406, 5409
13	14	15										*5407
w	14	15							22			*5410
	14	15		17								*5411
	14	15							22		24	*5414
	14	15		17					22		24	*5415
	14	15										*5416
13			16									*5601, 5607, 5624
13												*5602, 5610, 5619N
									22			*5603
13												*5604
			16	17								*560501, 560502, 5621
			16	17					22			*5606
13			16									*5608
			16				20					*5613
			16	17								*5615
13			16					21				*5616
13			16									*5620
			16								24	*5622
13		15			18							*5623, 5901, 5905
		15		17	18							*5902
		15			18						24	*5903
13			16		18							*5904
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

Length of spec.	400	125	150	235	235	100	180	105	215	140	125	210
PCR products								425	375		180	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*8101	1											12
*8103, 8104N	?											12
*8201, 8202	1	2										
*8301	1											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the HLA-B*55 subtyping.

In addition, wells number 5, 8, 14, 18, 19, 21 and 23 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

²The codon, in the 1st, 2nd or 3rd exon or the 1st intron, matching the specificity-determining 3'-end of the primer is given. Codon numbering as in *Tissue Antigens* 1998, **51:II**, 467-507. The sequence of the 3 Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The codon, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

⁴The B*5506 sequence shown to contain errors and be identical to B*5504.

150	215	245	245	105	215	205	95	270	95	165	100	Length of spec. PCR products
				380	310		220		225	220	235	
					415				285			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
								21				*8101
								?				*8103, 8104N
								21				*8201, 8202
								21				*8301
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

⁵Primer mix 8: Specific PCR fragment of 105 bp in the B*5513 and B*9537, 390601-390602, 3933, 3934, 3950, 4086, 4502, 511301-511302, 5214, 5622, 5903 and 7301 alleles. Specific PCR fragment of 425 bp in the B*5512 allele.

Primer mix 9: Specific PCR fragment of 215 bp in the B*5525 allele. Specific PCR fragment of 375 bp in the B*5511 and 5514 alleles.

Primer mix 11: Specific PCR fragment of 125 bp in the B*5515 allele. Specific PCR fragment of 180 bp in the B*5509, 5522, 5524 and B*1301-130205, 1307N-1309, 1311, 1314-1320, 132201-1323, 1325 and 4048 alleles.

Primer mix 17: Specific PCR fragment of 105 bp in the B*5517, 5520, 5527, 5528 and B*0809, 1583, 2714, 40060101-400602, 4044, 4053, 4070, 4075, 4083, 4093, 4095, 4096, 4101, 4105-4107, 4204, 4420, 4447, 510101-5103, 5105, 5107-5112, 5114, 5116-512402, 5126-5134, 5136, 5138-5141N, 5143, 5144N, 5148-5155, 5157, 5158, 5160, 5161, 5165, 520101-5213, 5404, 5411, 5415, 560501-5606, 5615, 5621, 5808, 5902 and 7801-7806 alleles. Specific PCR fragment of 380 bp in the B*5518 and 5534 alleles.

Primer mix 18: Specific PCR fragment of 215 bp in the B*5525 allele. Specific PCR fragment of 310 bp in the B*5519 allele. Specific PCR fragment of 415 bp in the B*5518, 5531 and B*5623 and 5901-5905 alleles.

Primer mix 20: Specific PCR fragment of 95 bp in the B*5526 allele. Specific PCR fragment of 220 bp in the B* 5520 and B*0809, 1583, 4101, 4105-4107, 4204, 4415, 4418, 4420, 4501-4509, 5108, 5120, 5136, 5144N and 5613 alleles.

Primer mix 22: Specific PCR fragment of 95 bp in the B*5523, 5527 and B*1304, 1504, 1516, 1567, 1595, 4044, 4420, 4447, 4509, 4904, 4905, 5414, 5415 alleles. Specific PCR fragment of 225 bp in the B*5509, 5521 and B*1318, 1504, 9537, 3933, 5105, 5129, 5154, 5161 and 5410 alleles. Specific PCR fragment of 285 bp in the B*5535 and B*5603 and 5606 alleles.

Primer mix 23: Specific PCR fragment of 165 bp in the B*5529 allele. Specific PCR fragment of 220 bp in the B*5516, 5521 and B*1504, 9537, 4202, 4209, 4506, 5161 and 5402 alleles.

Primer mix 24: Specific PCR fragment of 100 bp in the B*5513, 5523, 5527, 5532, 1304, 1504, 1516, 1567, 1595, 9537, 9555, 3537, 390601, 390602, 3933, 3934, 3950, 4044, 4086, 4420, 4447, 4502, 4509, 4904, 4905, 511301, 511302, 5137, 5163, 5212, 5214, 5414, 5415, 5622, 5903 and 7301 allele. Specific PCR fragment of 235 bp in the B*5533 allele.

‘w’, may be weakly amplified.

‘?’, the nucleotide sequence of the primer matching region is not know.

CELL LINE VALIDATION SHEET																					
HLA-B*55 SSP subtyping kit																					
				Prod. No.:	Well																
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
					200732701	200845902	200845903	200732704	200732705	200732706	200732707	200732708	200961509	200732710	200732711	200732712	200732713	200732714	200732715	200732716	
	IHWC cell line		B*																		
1	9001 SA		*0702		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
2	9280 LK707		*5201	*7301	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+
3	9011 E4181324		*52011		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+
4	9275 GU373		*1510	*5301	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011		*3701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*3901	*5101	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+
7	9020 QBL		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU		*3501		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*5401		+	+	-	-	-	-	-	-	+	-	-	+	+	+	-	-	-
11	9051 PITOUT		*4403		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*1501	*1520	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540		*0801	*5501	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-
18	9257 32367		*1401	*5601	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+
19	9038 BM16		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*3503		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*4002	*5602	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
24	9035 JBUSH		*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*1402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*5801		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0705	*5101	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
28	9320 BEL5GB		*4402	*4403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*4403		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*4201		-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-	-
31	9019 DUCAF		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*4102		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*4402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*1501	*3501	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*0702		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
38	9099 LZL		*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0801	*2705	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199		*1302	*4601	-	+	-	+	-	-	-	-	-	-	+	-	+	-	-	-	-
41	9055 H0301		*1402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*4601		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*4601		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*4201	*5001	-	+	-	-	+	-	-	-	-	-	-	+	-	-	-	-	+
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
47	9045 TUBO		*5101		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+
48	9303 TER-ND		*3501	*4403	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET														
HLA-B*55 SSP subtyping kit														
				Prod. No.:	Well									
					17	18	19	20	21	22	23	24		
					200961517	200961518	200845919	200845920	200732721	200961522	200961523	200961524		
	IHWC cell line		B*											
1	9001 SA		*0702		-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*5201	*7301	+	-	-	-	-	-	-	-	-	+
3	9011 E4181324		*52011		+	-	-	-	-	-	-	-	-	-
4	9275 GU373		*1510	*5301	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011		*3701		-	-	-	-	+	-	-	-	-	-
6	9353 SM		*3901	*5101	+	-	-	-	+	-	-	-	-	-
7	9020 QBL		*1801		-	-	-	-	+	-	-	-	-	-
8	9025 DEU		*3501		-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*3801		-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*5401		-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*4403		-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*5701		-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*2705		-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*1501	*1520	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*4001		-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*4002		-	-	-	-	+	-	-	-	-	-
17	9282 CTM3953540		*0801	*5501	-	-	-	-	-	-	-	-	-	-
18	9257 32367		*1401	*5601	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*1801		-	-	-	-	+	-	-	-	-	-
20	9059 SLE005		*4001		-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*1501		-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*3503		-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*4002	*5602	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*3801		-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*1402		-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*5801		-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0705	*5101	+	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB		*4402	*4403	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*4403		-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*4201		-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF		*1801		-	-	-	-	+	-	-	-	-	-
32	9297 HAG		*4102		-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*4001		-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*3801		-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*4402		-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*1501	*3501	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*0702		-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*1501		-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0801	*2705	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199		*1302	*4601	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*1402		-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*4601		-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*4601		-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*3801		-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*4201	*5001	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*5101		+	-	-	-	-	-	-	-	-	-
48	9303 TER-ND		*3501	*4403	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP[®] HLA-B*55 SSP

Product number: 101.570-06 – including *Taq* polymerase
Lot number: 06G
Expiry date: 2011-August-01
Number of tests: 6
Number of wells per test: 24

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2007-327-01	9	2009-615-09	17	2009-615-17
2	2008-459-02	10	2007-327-10	18	2009-615-18
3	2008-459-03	11	2007-327-11	19	2008-459-19
4	2007-327-04	12	2008-459-12	20	2008-459-20
5	2007-327-05	13	2007-327-13	21	2007-327-21
6	2007-327-06	14	2007-327-14	22	2009-615-22
7	2007-327-07	15	2007-327-15	23	2009-615-23
8	2007-327-08	16	2007-327-16	24	2009-615-24

The specificity of each primer solution of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 6, 9 and 19 were available. The specificities of the primers in primer solutions 19 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 6 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solution 9 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In addition, one or two primers in primer solutions 9, 11, 18, 20, 23 and 24 were not possible to test. Additional 5'-primers in primer solutions 8, 17 and 20, and additional 3'-primers in primer solutions 8, 11, 17 and 18 were tested by separately adding one additional 3'-primer, respectively one additional 5'-primer.

Results: No false positive or false negative amplifications were obtained.

Date of approval: 2009-August-25

Approved by:

Quality Control, Supervisor

Lot No.: **06G**

Lot-specific information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*55
Product number: 101.570-06
Lot number: 06G

Intended use: HLA-B*55 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2000 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Saltsjöbaden, Sweden
2009-August-25

Olle Olerup
Managing Director

Lot No.: **06G**

Lot-specific information

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E-mail: info.us@olerup.com

Web page: <http://www.olerup.com>

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