

Olerup SSP[®] HLA-B*53

Product number:	101.549-06 – including <i>Taq</i> polymerase
Lot number:	08F
Expiry date:	2010-August-01
Number of tests:	6
Number of wells per test:	16
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. 08F.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* HLA-B*53 LOT.

The HLA-B*53 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP[®]* HLA-B*53 lot was made (**Lot No. Y25**).

The primers of the wells detailed below have been exchanged, added or modified compared to the previous lot.

Well	5'-primer	3'-primer	rationale
3	Added	Added	New primer pair added for the B*5315 allele
7	Added	Added	Primer pair from well 14 added for improved resolution for the B*5310 allele
14	Added	Added	New primer pair added for the B*5314 allele

PRODUCT DESCRIPTION

HLA-B*53 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*5301 to B*5316 alleles.

PLATE LAYOUT

Each HLA-B*53 test consists of 16 PCR reactions in a 16 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

The 16 well PCR plate is marked with 'HLA-B*53' in silver/gray ink.

Well No. 1 is marked with the Lot No. '08F'.

The PCR plates are heat-sealed with a PCR-compatible foil.

Please note: When removing each 16 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-B*53 SSP subtypings will be influenced by the B*07, seven B*08, the B*13, the B*14, most B*15, the B*18, the B*27, the B*35, the B*37, the B*38, the B*39, the B*40, two B*42, the B*44, the B*45, the B*46, the B*47, the B*48, the B*49, the B*50, the B*51, the B*52, the B*54, the B*55, the B*56, the B*57, the B*58, the B*59, the B*67, 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*0336 allele will be amplified by primer mix 9, the Cw*0434 will be amplified by primer mixes 4 and 9, and the Cw*0408 and Cw*1515 alleles will be amplified by primer mix 4.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*53, i.e. **B*5301 to B*5316**, recognized by the HLA Nomenclature Committee in July 2008¹ will be amplified by the primers in the HLA-B*53 SSP kit. The HLA-B*53 primer set cannot distinguish the B*530101 to B*530104 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2008-July-11, release 2.22.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The sixteen HLA-B*53 alleles can be combined in 136 homozygous and heterozygous combinations. 103 of these genotypes do not give rise to unique amplification patterns. (The different lengths of the specific PCR products in lanes 3, 6 and 14 were not considered in these calculations.)

+++---++	+++-----	5303,5306 = 5306,5315
+++---+-	+++-----	5302,5303 = 5302,5315
++-++-++	+++-----	5305,5306 = 5306,5311 = 5306,5312 =
		5306,5313 = 5306,5316
++-++++-	+++-----	5302,5305 = 5302,5311 = 5302,5312 =
		5302,5313 = 5302,5316
++-++-++	+++-----	5301,5306 = 5302,5306 = 5302,5308
++-++-+-	---+-----	5306,5306 = 5306,5308
++-++-+-	+++-----	5301,5302 = 5302,5302
+---+---+	+++-----	5303,5307 = 5307,5315
+---+---+	+++-----	5303,5304 = 5304,5315
+---+---+	+++-----	5303,5305 = 5305,5315 = 5312,5315
+---+---+	+++-----	5303,5316 = 5311,5315 = 5313,5315 =
		5315,5316
+---+---+	+++-----	5303,5310 = 5310,5315
+---+---+	+++-----	5303,5308 = 5308,5315
+---+---+	+++-----	5303,5314 = 5314,5315
+---+---+	+++-----	5301,5303 = 5301,5315 = 5303,5315 =
		5315,5315
+-----+	+++-----	5305,5307 = 5307,5312
+-----+	+++-----	5304,5305 = 5304,5312
+-----+	+++-----	5307,5311 = 5307,5313 = 5307,5316
+-----+	+++-----	5304,5311 = 5304,5313 = 5304,5316
+-----+	+++-----	5304,5310 = 5307,5310 = 5307,5314
+-----+	+++-----	5304,5307 = 5307,5307
+-----+	+++-----	5305,5310 = 5310,5312
+-----+	+++-----	5305,5308 = 5308,5312
+-----+	+++-----	5305,5314 = 5312,5314
+-----+	+++-----	5301,5305 = 5301,5312 = 5305,5305 =
		5305,5311 = 5305,5312 = 5305,5313 =
		5305,5316 = 5312,5316
+-----+	+++-----	5310,5311 = 5310,5313 = 5310,5316
+-----+	+++-----	5308,5311 = 5308,5313 = 5308,5316
+-----+	+++-----	5311,5314 = 5313,5314 = 5314,5316
+-----+	+++-----	5301,5309 = 5309,5316
+-----+	+++-----	5301,5311 = 5301,5313 = 5301,5316 =
		5313,5316
+-----+	+++-----	5311,5316 = 5316,5316
+-----+	+++-----	5301,5310 = 5310,5310 = 5310,5314
+-----+	+++-----	5301,5314 = 5314,5314
--+---+	+++-----	5303,5311 = 5303,5313
-----+	+++-----	5311,5312 = 5312,5312 = 5312,5313
-----+	+++-----	5309,5309 = 5309,5311 = 5309,5313
-----+	+++-----	5311,5313 = 5313,5313

SPECIFICITY TABLE

HLA-B*53 SSP subtyping

Specificities and sizes of the PCR products of the 16 primer mixes used for HLA-B*53 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*53 alleles	Other amplified HLA Class I alleles ³
1 ⁶	145 bp	800 bp	530101-5302, 5304-5308, 5310, 5314-5316	3806, 3807, 4406, 4903, 510101-512402, 5126-5146, 5148, 5149, 5151-5153, 5155-5157, 520101-520104, 5203-5214, 580101-5802, 5804-5816, 5818, 5819
2	270 bp	1070 bp	5302, 5306	1822, 3521, 3524, 3581, 3704, 4028, 5104, 5146, 5156, 5714, 5809
3 ^{6,7}	135, 295 bp	800 bp	5303, 5315	0712, 0714, 071801-071802, 370101-3704, 3707-3709, 3712, 3713, 4030, 4034, 4059, 4817
4 ⁴	180 bp	800 bp	5304, 5307	1303, 1558, 1573, 9533, 9537, 3503, 3506, 3513, 3536, 3538, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 3585, 3932, 3933, 4071, 4410, 4415, 4418, 4501, 4502, 4504-4507, 4611, 4901-4903, 5001, 5002, 5004, 511301-511302, 5115, 5214, 5403, 5601, 5602, 5604, 5607, 5608, 5611, 5613, 5614, 5616, 5617, 5620, 5622, 8201, 8202, Cw*0408, Cw*0434, Cw*1515
5 ⁶	140 bp	800 bp	5305, 5309, 5311-5313, 5316	1809, 3710, 5154, 5209
6 ⁸	205, 235 bp	800 bp	5302, 5305, 5306, 5312	1538, 1587, 9515, 180101-1809, 1812-1815, 1817N-1819, 1820 <small>weakly</small> , 1822-1825, 1827-1829, 3521, 3524, 3943, 4415, 5137, 5145, 5209, 5714, 5809
7 ^{5,6}	130 bp	800 bp	5307, 5310	1532, 1818, 370101-370104, 3703N-3706, 3708, 3710, 3711, 3713, 3714, 3909
8	165 bp	1070 bp	5306, 5308	070201-0724, 0726-0747, 0749N, 0750, 0752-0766, 0806, 0820, 1316, 1320, 1401-1409, 15010101-150104, 150106-1504, 1506-1519, 1521, 1523-1530, 1532-1540, 1542-1547, 1549,

				1550, 1553, 1554, 1556-1558, 1560-1574, 1576-1582, 1585, 1587, 1589, 1590, 1592-1599, 9501-9504, 9506, 9508-9510, 9512, 9513, 9515-9522, 9525-9529, 9531-9535, 9537-9544, 9546-9549N, 1815, 1819, 1821, 270401-270402, 2706, 2710, 2715, 2718, 2720, 2721, 2724, 2725, 2740, 3511, 351401-351402, 3521, 3543, 3544, 3558, 3567, 3579, 3586, 3707, 3713, 3810, 3918, 3935, 3936, 4005, 4015, 4016, 4023, 4026, 4028, 4032, 4051, 460101-4605, 4607N, 4608, 4610, 4612, 4614-4616, 4805, 4808, 4815, 4901-4905, 5001, 5002, 5004, 510101-5104, 5106, 5107, 5111N-5114, 5116-5118, 5121-512402, 5126-5130, 5132-5139, 5141N, 5143, 5145, 5146, 5148-5152, 5155-5157, 520101-5202, 5204-5209, 5211-5214, 5406, 550101-550104, 5503, 5505, 5509, 5511, 5514, 5515, 5517, 5521, 5524, 5525, 5528, 5529, 5531, 5603, 560501-5606, 5621, 5709, 5713, 5806, 5808, 5819, 7801-7803, 7805, 7806
9⁶	75 bp	1070 bp	530101-5305, 5307, 5309-5316	0821, 0825, 1303, 1304, 1505, 1520, 1531, 1548, 1551, 1555, 1584, 1591, 9507, 9523, 9536, 2738, 350101-3510, 3512, 3513, 3516-352002, 3522-3530, 3532, 3534, 3536-3542, 3545-3557, 3559, 3561-3564, 356801-3572, 3574-3578, 3580-3585, 3590-3592, 3594, 3932, 3933, 4063, 4071, 4092, 44020101-440303, 4405-4415, 4417-4420, 4422-4430, 4432-4455, 4457-4463, 4501-4507, 4509, 4609, 4611, 4613, 4802, 5105, 5108-510902, 5115, 5119, 5120, 5140, 5142, 5144N, 5154, 5203, 5210, 5403, 5508, 5601, 5602, 5604, 5607-5609, 5611, 5613-5617, 5620, 5622, 570101-570102, 5702-5708, 5710-5712, 5714-5717, 580101-5802,

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Lot-specific Information

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				5804, 5807, 5809-5818, 7804, 8201, 8202, 8301, Cw*0336, Cw*0434
10	150 bp	1070 bp	530101- 5303, 5305, 5309, 5310, 5311 ^{weakly} , 5312-5316	1304, 1310 ^{weakly} , 1505, 1520, 1531 ^{weakly} , 1552, 1555 ^{weakly} , 1584 ^{weakly} , 1591, 9507, 9514, 9523, 9524, 9536, 180101-1812, 1813 ^{weakly} , 1814, 1817N, 1818, 1820 ^{weakly} , 1822-1825, 1827-1829, 2741, 350101-350107, 3505, 3507, 350801-350803 ^{weakly} , 3510, 3515- 3517, 3519-352002, 3523-3530, 3532, 3535, 3537, 3540N-3542, 3545 ^{weakly} , 3546-3554, 3557, 3561 ^{weakly} , 3563, 3564, 3566 ^{weakly} , 356801- 3569, 3571, 3572, 3576-3578, 3580, 3582, 3590-3594, 3907, 3943, 4003, 4020, 4038, 4052, 4059, 4060 ^{weakly} , 4443, 4606, 4613, 4802, 4814, 5409, 5414, 5523, 5532, 5609, 5618, 570101-570103, 5706, 5708, 5710, 5711, 5714-5716, 580101-5802, 5804, 5807, 5809-5818
11⁶	85 bp	800 bp	530101- 5303, 5305, 5306, 5308- 5316	1304, 1310 ^{weakly} , 15010101-150104, 150106-150108, 1502 ^{weakly} , 1503- 1505, 1506 ^{weakly} , 1507, 1508, 151101-1512, 1513 ^{weakly} , 1514-1516, 1518-1520, 1521 ^{weakly} , 1523, 1524, 1525 ^{weakly} , 1526N-1529, 1531 ^{weakly} , 1532, 1534, 1535, 1536 ^{weakly} , 1538- 1540, 1543, 1544 ^{weakly} , 1546, 1547, 1549-1554, 1555 ^{weakly} , 1556, 1557, 1560-1562, 1564-1571, 1574-1576, 1579N-1582, 1584, 1585, 1587, 1588 ^{weakly} , 1589 ^{weakly} , 1591-1598, 9501- 9505, 9506 ^{weakly} , 9508-9511N, 9512 ^{weakly} , 9513-9515, 9517-9520, 9521 ^{weakly} , 9522-9527, 9528 ^{weakly} , 9529 ^{weakly} , 9531, 9532, 9534-9536, 9538-9540, 9542-9549N, 180101- 1815, 1817N-1819, 1820 ^{weakly} , 1822- 1825, 1827-1829, 2741, 350101- 350107, 3505, 3507-350803, 3510, 3511, 351401-3517, 3519-3521, 3523-3530, 3532, 3535, 3537, 3540N-3543, 3545-3552, 3554, 3557, 3558, 3561-3563, 3566-3569, 3571, 3572, 3576-3580, 3582, 3586, 3590-

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				3594, 3907, 3943, 4417, 4443, 4509, 460101-4605, 4607N-4610, 4612-4616, 4802, 4814, 4904, 4905 ^{weakly} , 5137, 5145, 5406, 5409, 5414, 5514, 5523, 5532, 5603, 5609, 5618, 570101-570103, 5706, 5708, 5710, 5711, 5714-5716, 580101-5802, 5804-5807, 5809-5819
12⁶	105 bp	1070 bp	-	130201-1303, 1308Q, 1309, 1314-1316, 1318, 1319, 1542, 3560, 4415, 4418, 4501, 4503-4508, 4611, 4901-4903, 5001, 5002, 5004, 5115, 5401-5403, 5405N, 5407, 5408N, 5410, 5412, 5413, 550101-5503, 5505, 5507, 5509-5512, 5515, 5516, 5518, 5519, 5521, 5522, 5524-5526, 5529-5531, 5601, 5607, 5608, 5613, 5614, 5616, 5617, 5619N, 5620, 5623, 5901
13⁶	90bp	1070 bp	-	580101-5802, 5804-5819
14^{6,9}	95, 130 bp	800 bp	5310, 5314	0709, 0711, 0717, 0828, 0835, 1405, 1507, 1555, 1568, 9526, 1814, 3505, 3551, 3558, 3566, 3572, 3903, 3924, 3937, 4003, 4206, 4209, 4612, 4807, 4814, 5818, Cw*0808
15⁶	105 bp	1070 bp	5309	180101-1806, 1808-1815, 1817N-1828, 352001-352002, 3528, 3572, 370101-3705, 3707-3714, 4903, 5107, 520101-520104, 5203-5205, 5207-5214, 7805, 7806
16⁶	115 bp	1070 bp	530101-5310, 5312-5315	0726, 0734, 0743, 0748, 0813, 0825, 1301-1304, 1306-1317, 1319-1322, 1401-140202, 1404-1409, 1502, 1503, 1505, 1506, 1509, 1510, 1513, 1516-1518, 1520, 1521, 1523, 1525, 1529, 1531, 1536, 1537, 1539, 1540, 1542, 1544, 1548, 1552, 1555, 1561, 1562, 1564, 1567, 1569, 1572, 1574, 1580, 1586, 1588-1591, 1593, 1595, 1598, 9503, 9506-9508, 9512, 9514, 9515, 9519, 9521, 9523, 9524, 9527, 9531-9534, 9536, 9538, 9539, 180101-1812, 1814, 1815, 1817N, 1818, 1820, 1822-1829, 2701-270402, 270502-2721, 2723, 2724, 2726-2743, 350101-3507, 350901-3513, 3515-3517, 3519-3537, 3539-

3542, 3546-3560, 3563-3565Q,
356801-3572, 3574-3578, 3581-
3585, 3588, 3590-3594, 3702,
380101-3817, 39010101-39010102L,
390103-3907, 3909, 3910, 3912-
3917, 391901-3920, 3922-3932,
3934, 3935, 3937-3945, 400101-
401403, 4018-4022N, 4024-4031,
4033-4040, 4042-4092, 440301-
440303, 4407, 4410, 4413, 4426,
4429-4432, 4436-4440, 4443, 4445-
4447, 4450, 4454, 4457, 4460,
4461N, 446401-446402, 4606, 4608,
4611, 4613, 47010101-4705,
480101-4804, 4806, 4807, 4809-
4818, 4901-4905, 5001, 5002, 5004,
510101-5104, 5106, 5107, 510901-
5119, 5121-512402, 5126-5128,
5130-5135, 5137-5143, 5145, 5146,
5148-5153, 5156, 5157, 520101-
5214, 5401-5405N, 5407-5409,
5411-5415, 550101-5505, 5507,
5508, 5510-5519, 5522-5532, 5601,
5602, 5604-5612, 5614-5623,
570101-570103, 570301-570302,
5706-5708, 5710, 5711, 5714-5717,
580101-5802, 5804-5819, 5901-
5903, 670101-6702, 7301, 7801-
7806, 8101-8104N

¹Alleles 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*53 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.

²The 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 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*53 subtyping.

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In addition, wells number 3 to 7, 11 and 14 contain the primer pair giving rise to the shorter, 800 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.

³Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*53 alleles will be amplified by all 16 primer mixes. In addition, the Cw*0336 and Cw*0434 allele will be amplified by primer mix 9, the Cw*0408, the Cw*0434 and Cw*1515 alleles will be amplified by primer mix 4, and the Cw*0808 allele will be amplified by primer mix 14.

⁴Primer mix 3 may give rise to a specific PCR fragment longer than 500 bp, that should be disregarded in the interpretation of HLA-B*53 subtypings.

⁵Primer mix 7 has a tendency of giving rise to nonspecific amplifications and also to primer oligomer formation.

⁶Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁷Primer mix 3: Specific PCR fragment of 135 bp in the B*5303 and 370101-3704, 3707-3709, 3712 and 3713 alleles. Specific PCR fragment of 295 bp in the B*5315 and the 0712, 0714, 071801-071802, 4030, 4034, 4059 and 4817 alleles.

⁸Primer mix 6: Specific PCR fragment of 205 bp in the B*5302 and 5306 and the 1538, 180101-1809, 1812-1815, 1817N-1819, 1820^{weakly}, 1822-1825, 1827-1829, 3521, 3524, 3943, 5137, 5145, 5714 and 5809 alleles. Specific PCR fragment of 235 bp in the the B*5305, 5312 and the 1587, 9515, 5209, 4415 and 5209 alleles.

⁹Primer mix 14: Specific PCR fragment of 95 bp in the B*5314, 0709, 0711, 0717, 0828, 0835, 1405, 1507, 1555, 1568, 9526, 1814, 3505, 3551, 3558, 3566, 3572, 3903, 3924, 3937, 4003, 4206, 4209, 4612, 4807, 4814, 5818 and the Cw*0808 alleles. Specific PCR fragment of 130 bp in the B*5310 allele.

INTERPRETATION TABLE								
HLA-B*53 SSP subtyping								
Amplification patterns of the B*5301 to B*5316 alleles								
	Well⁴							
	1	2	3	4	5	6	7	8
Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Length of int.	800	1070	800	800	800	800	800	1070
pos. control¹								
5'-primer(s)²	206	355	206	419	206	106	106	527
	5'-gAC ^{3'}	5'-TCA ^{3'}	5'-gAC ^{3'}	5'-gTT ^{3'}	5'-gAC ^{3'}	5'-CCA ^{3'}	5'-CCA ^{3'}	5'-TgA ^{3'}
			355			419	106	
			5'-TCA ^{3'}			5'-gTC ^{3'}	5'-CCg ^{3'}	
							368	
							5'-gTC ^{3'}	
3'-primer(s)³	309	583	301	559	302	302	197	3rd I
	5'-ATC ^{3'}	5'-gTg ^{3'}	5'-gTC ^{3'}	5'-CAg ^{3'}	5'-ggC ^{3'}	5'-ggC ^{3'}	5'-gAA ^{3'}	5'-TAT ^{3'}
			610		309	583	463	
			5'-CTC ^{3'}		5'-gTg ^{3'}	5'-gTg ^{3'}	5'-gCT ^{3'}	
Well No.	1	2	3	4	5	6	7	8
HLA-B allele								
*530101-530104	1							
*5302	1	2				6		
*5303			3					
*5304	1			4				
*5305	1				5	6		
*5306	1	2				6		8
*5307	1			4			7	
*5308	1							8
*5309					5			
*5310	1						7	
*5311					5			
*5312					5	6		
*5313					5			
*5314	1							
*5315	1		3					
*5316	1				5			
Well No.	1	2	3	4	5	6	7	8

INTERPRETATION TABLE								
HLA-B*53 SSP subtyping								
Amplification patterns of the B*5301 to B*5316 alleles								
Well ⁴								
9	10	11	12	13	14	15	16	
75	150	85	105	90	95	105	155	Length of spec.
					130			PCR product(s)
1070	1070	800	1070	1070	800	800	1070	Length of int.
								pos. control ¹
527	419	419	357	206	106	206	539	5'-primer(s) ²
5'-TgT ^{3'}	5'-gTC ^{3'}	5'-gTC ^{3'}	5'-Tgg ^{3'}	5'-ggA ^{3'}	5'-CCA ^{3'}	5'-gAC ^{3'}	5'-gC ^T	
					363			
					5'-AgC ^{3'}			
559	527	463	420	256	197	272	3 rd I	3'-primer(s) ³
5'-CAg ^{3'}	5'-CCA ^{3'}	5'-gCT ^{3'}	5'-gCT ^{3'}	5'-CTC ^{3'}	5'-gAA ^{3'}	5'-Tgg ^{3'}	5'-TAT ^{3'}	
				256	419			
				5'-CCC ^{3'}	5'-Cgg ^{3'}			
					419			
					5'-CgA ^{3'}			
9	10	11	12	13	14	15	16	Well No.
								HLA-B allele
9	10	11					16	*530101-530104
9	10	11					16	*5302
9	10	11					16	*5303
9							16	*5304
9	10	11					16	*5305
		11					16	*5306
9							16	*5307
		11					16	*5308
9	10	11				15	16	*5309
9	10	11			14		16	*5310
9	w	11						*5311
9	10	11					16	*5312
9	10	11					16	*5313
9	10	11			14		16	*5314
9	10	11					16	*5315
9	10	11						*5316
9	10	11	12	13	14	15	16	Well No.

Lot No.: **08F**

Lot-specific Information

www.olerup.com

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
*070201-0708, 0710, 0713, 0715, 0716, 0719-0724, 0727-0733, 0735-0742, 0744-0747, 0749N, 0750, 0752-0766, 0806, 0820, 1403, 1530, 1533, 1545, 1563, 1577, 1578, 1599, 9516, 9541, 2725, 3544, 3918, 3936, 4015, 4016, 4023, 4032, 4805, 4808, 5709, 5713								8
*0709, 0711, 0717								8
*0712, 0714, 071801-071802			3					8
*0726, 0734, 0743, 1320, 1401-140202, 1404, 140601-1409, 1509, 1510, 15170101-151702, 1537, 1572, 1590, 270401-270402, 2706, 2710, 2715, 2718, 2720, 2721, 2724, 2740, 3810, 3935, 4005, 4026, 4051, 4815, 5150, 5202, 5517, 5528, 560501-5606, 5621, 7801-7803								8
*0748, 0813, 1301, 1306, 1307N, 1311-1313, 1317, 1321, 1322, 1586, 2701-2703, 270502-270510, 2707-2709, 2711-2714, 2716, 2717, 2719, 2723, 2726-2737, 2739, 2742, 2743, 3531, 3533, 3565Q, 3588, 380101-3805, 3808, 3809, 3811-3817, 39010101-39010102L, 390103-390202, 3904-390602, 3910, 3912-3917, 391901-3920, 3922, 3923, 3925N-3931, 3934, 3938Q-3942, 3944, 3945, 400101-400203, 4004, 40060101-401403, 4018, 4019, 4021, 4022N, 4024, 4025, 4027, 4029, 4031, 4033, 4035-4037, 4039, 4040, 4042-4050, 4053-4058, 4061, 4062, 4064-4070, 407201-4091, 4431, 446401-446402, 47010101-4705, 480101-480102, 480301-4804, 4806, 4809-4813, 4816, 4818, 5404, 5411, 5414, 5504, 5513, 5415, 5527, 5610, 5612, 5902, 5903, 670101-6702, 7301, 8101N-8104								
Well No.	1	2	3	4	5	6	7	8

Lot No.: **08F**

Lot-specific Information

www.olerup.com

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)
9	10	11	12	13	14	15	16	Well No.
								*070201-0708, 0710, 0713, 0715, 0716, 0719-0724, 0727-0733, 0735-0742, 0744- 0747, 0749N, 0750, 0752-0766, 0806, 0820, 1403, 1530, 1533, 1545, 1563, 1577, 1578, 1599, 9516, 9541, 2725, 3544, 3918, 3936, 4015, 4016, 4023, 4032, 4805, 4808, 5709, 5713
					14			*0709, 0711, 0717 *0712, 0714, 071801-071802
							16	*0726, 0734, 0743, 1320, 1401-140202, 1404, 140601-1409, 1509, 1510, 15170101-151702, 1537, 1572, 1590, 270401-270402, 2706, 2710, 2715, 2718, 2720, 2721, 2724, 2740, 3810, 3935, 4005, 4026, 4051, 4815, 5150, 5202, 5517, 5528, 560501-5606, 5621, 7801-7803
							16	*0748, 0813, 1301, 1306, 1307N, 1311- 1313, 1317, 1321, 1322, 1586, 2701-2703, 270502-270510, 2707-2709, 2711-2714, 2716, 2717, 2719, 2723, 2726-2737, 2739, 2742, 2743, 3531, 3533, 3565Q, 3588, 380101-3805, 3808, 3809, 3811-3817, 39010101-39010102L, 390103-390202, 3904-390602, 3910, 3912-3917, 391901- 3920, 3922, 3923, 3925N-3931, 3934, 3938Q-3942, 3944, 3945, 400101-400203, 4004, 40060101-401403, 4018, 4019, 4021, 4022N, 4024, 4025, 4027, 4029, 4031, 4033, 4035-4037, 4039, 4040, 4042- 4050, 4053-4058, 4061, 4062, 4064-4070, 407201-4091, 4431, 446401-446402, 47010101-4705, 480101-480102, 480301- 4804, 4806, 4809-4813, 4816, 4818, 5404, 5411, 5414, 5504, 5513, 5415, 5527, 5610, 5612, 5902, 5903, 670101-6702, 7301, 8101N-8104
9	10	11	12	13	14	15	16	Well No.

Lot No.: **08F**

Lot-specific Information

www.olerup.com

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
*0821, 3518, 44020101-440205, 4405, 4408, 4409, 4411, 4412, 4414, 4419N, 4420, 4422-4425, 4427-442802, 4433-4435, 4441, 4442, 4444, 4448, 4449, 4451-4453, 4455, 4458N, 4459, 4462, 4463, 5702, 5704, 5705, 5712, 8301								
*0825, 1548, 2738, 350201-350202, 350401-350403, 350901-350902, 3512, 3522, 3534, 3539, 3583, 4063, 4092, 440301-440303, 4407, 4413, 4426, 4429, 4430, 4432, 4436-4440, 4445-4447, 4450, 4454, 4457, 4460, 4461N, 5508, 5615, 570301-570302, 5707, 7804								
*0828, 0835, 4206, 4209								
*130201-130204, 1308Q, 1309, 1314, 1315, 1319, 3560, 5401, 5402, 5405N, 5407, 5408N, 5412, 5413, 550201-550202, 5507, 5510, 5512, 5516, 5518, 5519, 5522, 5526, 5530, 5619N, 5623, 5901								
*1303, 4611, 5403, 5601, 5607, 5608, 5614, 5616, 5617, 5620				4				
*1304, 1505, 1520, 1591, 9523, 9536, 350101-350107, 3507, 3510, 3516, 3517, 3519, 3523, 3525-3527, 3529, 3530, 3532, 3537, 3540N-3542, 3546-3550, 3552, 3554, 3557, 3563, 356801- 3569, 3571, 3576-3578, 3582, 3590-3592, 3594, 4443, 4613, 4802, 5609, 570101-570102, 5706, 5708, 5710, 5711, 5715, 5716								
*1310								
*1316, 1542, 550101-550104, 5503, 5505, 5511, 5515, 5524, 5525, 5529, 5531								8
*1318, 4508, 5410								
*1405								8
Well No.	1	2	3	4	5	6	7	8

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)	
9	10	11	12	13	14	15	16	Well No.	
9								*0821, 3518, 44020101-440205, 4405, 4408, 4409, 4411, 4412, 4414, 4419N, 4420, 4422-4425, 4427-442802, 4433-4435, 4441, 4442, 4444, 4448, 4449, 4451, 4453, 4455, 4458N, 4459, 4462, 4463, 5702, 5704, 5705, 5712, 8301	
9							16	*0825, 1548, 2738, 350201-350202, 350401-350403, 350901-350902, 3512, 3522, 3534, 3539, 3583, 4063, 4092, 440301-440303, 4407, 4413, 4426, 4429, 4430, 4432, 4436-4440, 4445-4447, 4450, 4454, 4457, 4460, 4461N, 5508, 5615, 570301-570302, 5707, 7804	
				14					*0828, 0835, 4206, 4209
			12				16	*130201-130204, 1308Q, 1309, 1314, 1315, 1319, 3560, 5401, 5402, 5405N, 5407, 5408N, 5412, 5413, 550201-550202, 5507, 5510, 5512, 5516, 5518, 5519, 5522, 5526, 5530, 5619N, 5623, 5901	
9			12					16	*1303, 4611, 5403, 5601, 5607, 5608, 5614, 5616, 5617, 5620
9	10	11					16	*1304, 1505, 1520, 1591, 9523, 9536, 350101-350107, 3507, 3510, 3516, 3517, 3519, 3523, 3525-3527, 3529, 3530, 3532, 3537, 3540N-3542, 3546-3550, 3552, 3554, 3557, 3563, 356801- 3569, 3571, 3576-3578, 3582, 3590-3592, 3594, 4443, 4613, 4802, 5609, 570101-570102, 5706, 5708, 5710, 5711, 5715, 5716	
	w	w						16	*1310
			12				16	*1316, 1542, 550101-550104, 5503, 5505, 5511, 5515, 5524, 5525, 5529, 5531	
12									*1318, 4508, 5410
					14		16	*1405	
9	10	11	12	13	14	15	16	Well No.	

Lot No.: **08F**

Lot-specific Information

www.olerup.com

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
*15010101-150104, 150106-150108, 1504, 1508, 151101-1512, 1514, 1515, 1519, 1524, 1526N-1528, 1534, 1535, 1543, 1546, 1547, 1549, 1550, 1553, 1554, 1556, 1557, 1560, 1565, 1566, 1570, 1571, 1576, 1579N, 1581, 1582, 1585, 1592, 1594N, 1596, 1597, 9501, 9502, 9504, 9509, 9510, 9513, 9517, 9518, 9520, 9522, 9525, 9535, 9540, 9542-9544, 9546-9549N, 351401-351402, 3543, 3567, 3579, 3586, 460101-4605, 4607N, 4610, 4614-4616, 5406, 5603								8
*1502, 1506, 1513, 1521, 1525, 1536, 1544, 1589, 9506, 9512, 9521, 4905								8
*1503, 1516, 1518, 1523, 1529, 1539, 1540, 1561, 1562, 1564, 1567, 1569, 1574, 1580, 1593, 1595, 1598, 9503, 9508, 9519, 9527, 9531, 9532, 9534, 9538, 9539, 3511, 4608, 4904, 5514								8
*1507, 1568, 9526, 4612								8
*1531								
*1532							7	8
*1538, 1587						6		8
*1551, 3562, 4417, 4509, 4609								
*1552, 9514, 9524, 2741, 3515, 3535, 3593, 3907, 5409, 5414, 5523, 5532, 5618, 570103								
*1555								
*1558, 1573, 9537				4				8
*1575, 9505, 9511N, 9545								
*1584, 350801-350803, 3545, 3561								
*1588								
* 9507, 3553N, 3564								
*9515						6		8
*9528, 9529								8
*9533				4				8
*180101-1806, 1808, 1812, 1817N, 1823N-1825, 1827, 1828						6		
*1807, 1929, 3943						6		
Well No.	1	2	3	4	5	6	7	8

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)
9	10	11	12	13	14	15	16	Well No.
		11						*15010101-150104, 150106-150108, 1504, 1508, 151101-1512, 1514, 1515, 1519, 1524, 1526N-1528, 1534, 1535, 1543, 1546, 1547, 1549, 1550, 1553, 1554, 1556, 1557, 1560, 1565, 1566, 1570, 1571, 1576, 1579N, 1581, 1582, 1585, 1592, 1594N, 1596, 1597, 9501, 9502, 9504, 9509, 9510, 9513, 9517, 9518, 9520, 9522, 9525, 9535, 9540, 9542-9544, 9546-9549N, 351401-351402, 3543, 3567, 3579, 3586, 460101-4605, 4607N, 4610, 4614-4616, 5406, 5603
		w					16	*1502, 1506, 1513, 1521, 1525, 1536, 1544, 1589, 9506, 9512, 9521, 4905
		11					16	*1503, 1516, 1518, 1523, 1529, 1539, 1540, 1561, 1562, 1564, 1567, 1569, 1574, 1580, 1593, 1595, 1598, 9503, 9508, 9519, 9527, 9531, 9532, 9534, 9538, 9539, 3511, 4608, 4904, 5514
		11			14			*1507, 1568, 9526, 4612
9	w	w					16	*1531
		11						*1532
		11						*1538, 1587
9		11						*1551, 3562, 4417, 4509, 4609
	10	11					16	*1552, 9514, 9524, 2741, 3515, 3535, 3593, 3907, 5409, 5414, 5523, 5532, 5618, 570103
9	w	w			14		16	*1555
								*1558, 1573, 9537
		11						*1575, 9505, 9511N, 9545
9	w	11						*1584, 350801-350803, 3545, 3561
		w					16	*1588
9	10						16	* 9507, 3553N, 3564
		11					16	*9515
		w						*9528, 9529
							16	*9533
	10	11				15	16	*180101-1806, 1808, 1812, 1817N, 1823N-1825, 1827, 1828
	10	11					16	*1807, 1929, 3943
9	10	11	12	13	14	15	16	Well No.

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
*1809					5	6		
*1810, 1811								
*1813						6		
*1814						6		
*1815						6		8
*1818						6	7	
*1819						6		8
*1820						w		
*1821								8
*1822		2				6		
*1826								
*3503, 3506, 3513, 3536, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 3585, 3932, 4071, 4410, 5602, 5604, 5611, 5622				4				
*3505, 3551								
*352001-352002, 3528								
*3521		2				6		8
*3524, 5714		2				6		
*3538, 3933, 4502, 8201, 8202				4				
*3558								8
*3566								
*3572								
*3580								
*3581		2						
*370101-370104, 3703N, 3708			3				7	
*3702			3					
*3704		2	3				7	
*3705, 3711, 3714							7	
*3706							7	
*3707			3					8
*3709, 3712			3					
*3710					5		7	
*3713			3				7	8
*3806, 3807, 5110, 5131, 5153	1							
*3903, 3924, 3937, 4807								
*3909							7	
*4030, 4034, 4817			3					
*4059			3					
*4060								
Well No.	1	2	3	4	5	6	7	8

Lot No.: **08F**

Lot-specific Information

www.olerup.com

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)
9	10	11	12	13	14	15	16	Well No.
	10	11				15	16	*1809
	10	11				15	16	*1810, 1811
	w	11				15		*1813
	10	11			14	15	16	*1814
		11				15	16	*1815
	10	11				15	16	*1818
		11				15		*1819
	w	w				15	16	*1820
						15		*1821
	10	11				15	16	*1822
						15	16	*1826
9							16	*3503, 3506, 3513, 3536, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 3585, 3932, 4071, 4410, 5602, 5604, 5611, 5622
9	10	11			14		16	*3505, 3551
9	10	11				15	16	*352001-352002, 3528
		11					16	*3521
9	10	11					16	*3524, 5714
9								*3538, 3933, 4502, 8201, 8202
		11			14		16	*3558
	w	11			14			*3566
9	10	11			14	15	16	*3572
9	10	11						*3580
9							16	*3581
						15		*370101-370104, 3703N, 3708
						15	16	*3702
						15		*3704
						15		*3705, 3711, 3714
								*3706
						15		*3707
						15		*3709, 3712
						15		*3710
						15		*3713
							16	*3806, 3807, 5110, 5131, 5153
					14		16	*3903, 3924, 3937, 4807
							16	*3909
							16	*4030, 4034, 4817
	10						16	*4059
	w						16	*4060
9	10	11	12	13	14	15	16	Well No.

Lot No.: **08F**

Lot-specific Information

www.olerup.com

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
*4406, 5105, 5108, 5120, 5144N	1							
*4003								
*4020, 4038, 4052, 4606								
*4028		2						8
*4415				4		6		
*4418, 4501, 4504-4507, 5613				4				
*4503								
*4814								
*4901, 4902, 5001, 5002, 5004				4				8
*4903	1			4				8
*510101-5103, 5106, 5111N, 5112, 5114, 5116-5118, 5121-512402, 5126-5128, 5130, 5132-5135, 5138, 5139, 5141N, 5143, 5148, 5149, 5151, 5152, 5157, 520601-520602	1							8
*5104, 5146, 5156	1	2						8
*5107, 520101-520104, 5204, 5205, 5207, 5208, 5211-5213	1							8
*510901-510902, 5119, 5140, 5142	1							
*511301-511302	1			4				8
*5115	1			4				
*5129, 5136, 5155	1							8
*5137, 5145	1					6		8
*5154					5			
*5203, 5210	1							
*5209	1				5	6		8
*5214	1			4				8
*5509, 5521								8
*580101-5802, 5804, 5807, 5810N-5816	1							
*5805	1							
*5806, 5819	1							8
*5808	1							8
*5809	1	2				6		
*5817N								
*5818	1							
*7805, 7806								8
HLA-B allele								
Well No.	1	2	3	4	5	6	7	8

Lot No.: **08F**

Lot-specific Information

www.olerup.com

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)
9	10	11	12	13	14	15	16	Well No.
9								*4406, 5105, 5108, 5120, 5144N
	10				14		16	*4003
	10						16	*4020, 4038, 4052, 4606
							16	*4028
9			12					*4415
9			12					*4418, 4501, 4504-4507, 5613
9			12					*4503
	10	11			14		16	*4814
			12				16	*4901, 4902, 5001, 5002, 5004
			12			15	16	*4903
							16	*510101-5103, 5106, 5111N, 5112, 5114, 5116-5118, 5121-512402, 5126-5128, 5130, 5132-5135, 5138, 5139, 5141N, 5143, 5148, 5149, 5151, 5152, 5157, 520601-520602
							16	*5104, 5146, 5156
						15	16	*5107, 520101-520104, 5204, 5205, 5207, 5208, 5211-5213
9							16	*510901-510902, 5119, 5140, 5142
							16	*511301-511302
9			12				16	*5115
								*5129, 5136, 5155
		11					16	*5137, 5145
9								*5154
9						15	16	*5203, 5210
						15	16	*5209
						15	16	*5214
			12					*5509, 5521
9	10	11		13			16	*580101-5802, 5804, 5807, 5810N-5816
		11		13			16	*5805
		11		13			16	*5806, 5819
				13			16	*5808
9	10	11		13			16	*5809
9	10	11		13			16	*5817N
9	10	11		13	14		16	*5818
						15	16	*7805, 7806
								HLA-B allele
9	10	11	12	13	14	15	16	Well No.

Length of spec.	145	270	135	180	140	205	130	165
PCR product(s)			295			235		
Well No.	1	2	3	4	5	6	7	8
Cw*0336								
Cw*0408, 1515				4				
Cw*0434				4				
Cw*0808								
Well No.	1	2	3	4	5	6	7	8

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 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA- B*53 subtyping.

In addition, wells number 3 to 7, 11 and 14 contain the primer pair giving rise to the shorter, 800 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.

²The nucleotide position, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. 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 nucleotide position, in the 2nd or 3rd exon of the 3rd intron 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.

Lot No.: **08F**

Lot-specific Information

www.olerup.com

75	150	85	105	90	95	105	155	Length of spec. PCR product(s)
9	10	11	12	13	14	15	16	Well No.
9								Cw*0336
								Cw*0408, 1515
9								Cw*0434
					14			Cw*0808
9	10	11	12	13	14	15	16	Well No.

⁴Primer mix 3: Specific PCR fragment of 135 bp in the B*5303 and 370101-3704, 3707-3709, 3712 and 3713 alleles. Specific PCR fragment of 295 bp in the B*5315 and the 0712, 0714, 071801-071802, 4030, 4034, 4059 and 4817 alleles.

Primer mix 6: Specific PCR fragment of 205 bp in the B*5302 and 5306 and the 1538, 180101-1809, 1812-1815, 1817N-1819, 1820^{weakly}, 1822-1825, 1827-1829, 3521, 3524, 3943, 5137, 5145, 5714 and 5809 alleles. Specific PCR fragment of 235 bp in the the B*5305, 5312 and the 1587, 9515, 5209, 4415 and 5209 alleles.

Primer mix 14: Specific PCR fragment of 95 bp in the B*5314, 0709, 0711, 0717, 0828, 0835, 1405, 1507, 1555, 1568, 9526, 1814, 3505, 3551, 3558, 3566, 3572, 3903, 3924, 3937, 4003, 4206, 4209, 4612, 4807, 4814, 5818 and the Cw*0808 alleles. Specific PCR fragment of 130 bp in the B*5310 allele.

'w', might be weakly amplified.

CELL LINE VALIDATION SHEET																				
HLA-B*53 SSP subtyping kit																				
				Prod. No.:	Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					200311001	200311002	200851003	200311004	200738205	200738206	200851007	200311008	200311009	200738210	200738211	200311012	200414413	200851014	200514715	200738216
	IHC 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	9007 DEM		*5701		-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	+
9	9026 YAR		*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
10	9107 LKT3		*5401		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+
11	9051 PITOUT		*4403		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
12	9052 DBB		*5701		-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	+
13	9067 BTB		*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
14	9071 OLGA		*1501	*1520	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	+
15	9075 DKB		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
16	9037 SWEIG007		*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
17	9008 WILJON		*1801		-	-	-	-	-	+	-	-	-	+	+	-	-	-	+	+
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*53 SSP

Product number: 101.549-06 – including *Taq* polymerase
Lot number: 08F
Expiry date: 2010-August-01
Number of tests: 6
Number of wells per test: 16

Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2003-110-01	9	2003-110-09
2	2003-110-02	10	2007-382-10
3	2008-510-03	11	2007-382-11
4	2003-110-04	12	2003-110-12
5	2007-382-05	13	2004-144-13
6	2007-382-06	14	2008-510-14
7	2008-510-07	15	2005-147-15
8	2003-110-08	16	2007-382-16

The specificity of each primer solution of the HLA-B*53 primer set has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 2, 3, 5, 6 and 14 were available. The specificities of the primers in primer solutions 2, 3, 5 and 14 were tested by separately adding one additional 3'-primer, respectively one additional 5'-primer. In primer solution 6 it was only possible to test one of the 5'-primers, one of the 3'-primers was not possible to test.

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

Date of approval: 2009-May-27

Approved by:

Quality Control, Supervisor

Lot No.: **08F**

Lot-specific Information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*53
Product number: 101.549-06
Lot number: 08F

Intended use: HLA-B*53 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 III, 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.

Saltsjöbaden, Sweden
2009-May-27

Olle Olerup
Managing Director

Lot No.: **08F**

Lot-specific Information

www.olerup.com

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